PRISMATIC 2

Instruction Manual

Ediction 1.4

INGLESE

Giben®

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UFFICIO DOCUMENTAZIONE TECNICA

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1. GENERAL SUPPLY SPECIFICATIONS

1.1. GENERAL INFORMATION

The description and illustration contained in this instruction manual are not binding in any way. GIBENIMPIANTI S.p.A. reserves the right to make any changes it believes necessary without prior notice.

IT IS ABSOLUTELY FORBIDDEN TO CARRY OUT, AND/OR AGREE TO THE CARRYING OUT OF, ANY MODIFICATIONS OF WHATEVER EXTENT TO ANY PART OR PARTS OF OUR MACHINES, BE THEY MECHANICAL, ELECTRIC OR ELECTONIC. WITHOUT WRITTEN AUTHORIZATION FROM US.

FAILURE TO COMPLY WITH THIS RULE SHALL RELIEVE OUR COMPANY OF ANY LIABILITY ARISING FROM SUCH MODIFICATION OR MODIFICATIONS.

Keep the instructions manual for the machine in good condition, i.e. without total or even partial erasure of the original text. To this end, keep the manual together with the other enclosures in the pocket inside the electric cabinet for ready access.
Besides the instructions manual, the customer is also supplied with the Programmer's manual, a copy of the electrical diagrams and accompanying replacement parts manual.
The client is supplied with the machine instruction manual, the Programmer manual, a copy of the wiring diagrams, and the relative spare parts manual.
The aim of the manual should be specified, so that the technician or operator fully understands the intended use and function of the machine.
The instruction manual describes all parts of the machine and defines its intended use. It also contains indispensable information to guarantee correct operation and safety of the operator and other personnel.

MANUAL SYMBOLS :
- ❏ Special attention must be paid to parts of the text marked in bold against a light grey background.
- ❏ All safety warnings and recommendations to maintain the panel saw in optimal working condition are marked with the symbol ☞.

MANUAL TERMINOLOGY :
- ❏ The term "Maintenance technician" refers to an operator who has attended the Giben training course.
- ❏ The term "Operator" refers to a general operator qualified to use the machine , and who has been instructed regarding the machine functions and risks associated with operation.

☞ **Read the operation and maintenance manual carefully prior to start–up, adjustment or maintenance operations, etc.**

The manufacturer declines all responsibility for damage or physical injury caused by failure to observe safety standards.

1.2. IDENTIFICATION DATA

Every machine is identified by a plate riveted to the left side of the electrical cabinet,indicating:

A – MODEL

B – SERIAL NUMBER

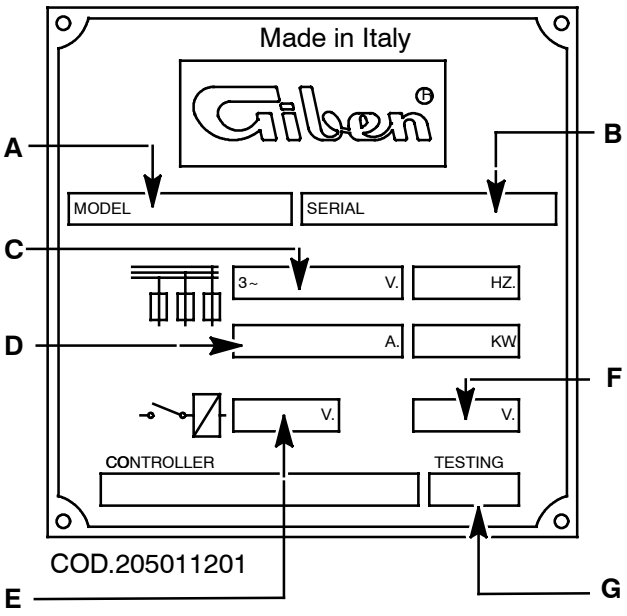
C – INPUT VOLTAGE

D – ELECTRICAL POWER CONSUMPTION

E – REMOTE SWITCHING VOLTAGE

F – P.L.C. INPUT VOLTAGE

G – WORKS TESTING DATE



Our Technical Assistance Service will provide customers with any information required,as well as help to solve electrical or mechanical problems that may arise. When seeking advice always quote the model and serial number.

1.3. GENERAL SAFETY WARNINGS

The machine has been designed and constructed in keeping with the latest accident prevention systems.

THE OPERATOR SHOULD READ THE FOLLOWING ADVICE AND CAUTIONS WITH GREAT CARE

☞ The machine must only be operated with all casings and fenders in place.

☞ Always replace any of the flaps on the safety bar that might have been accidentally damaged during the operating cycle.

☞ Turn the machine off before performing any adjustments or replacing parts; to ensure that the machine is not turned on during such operations, the mains switch may be locked (lock not included).

☞ Switch off the machine before making any adjustments or changing parts.

☞ Check the oil level in the lubricator distribution bowl to ensure proper lubrication of all pneumatic components at all times.

☞ Clear the machine periodically of waste accumulated during cutting.

☞ Keep the surrounding floor area clean.

☞ Follow the manteinance schedule to the letter.

☞ Always switch off the machine before cleaning.

☞ Always use blades in faultless condition.

☞ When wiring the machine to the main switch,make sure that the earth wire is connected correctly,also that the power supply is properly grounded through an efficient earth rod.

☞ Access to PLC programs, Inverter parameters and calibration of automatic switches is prohibited.

☞ Bear in mind that the electric cabinet in not equipped with an electric door interlock. Cabinet doors may only be opened with a special key.

☞ The term "Maintenace Engineer" refers to an operator who has been on the Giben training course.

☞ The term "Operator" refers to a general worker who is given the job of using the machine.

☞ All components and parts indicated as hazardous are difficult to reach and protected by guards accessible to specialised operators only.

☞ In case of fire, use a powder extinguisher. Wires employed in the circuit are in any case self–extinguishing.

☞ In the case of electrical or mechanical overload, the machine will automatically signal a state of emergency and stop.

☞ The fixed guards must on no account be removed when the machine is in operation.

☞ On no account enter the area enclosed by the safety barrier when the machine is in operation.

☞ Keep the work surface in perfect condition and replace broken or damaged parts immediately.

☞ Clean the machine regularly to remove all trimmings.

☞ Start up the machine in strict observance of the manual instructions.

☞ Never put hands or objects inside live parts, moving parts or inside the electrical cabinet.

☞ Never leave the machine unsupervised while in operation.

☞ Never allow unauthorised persons to approach the machine during operation.

☞ Inform relative maintenance personnel immediately of any device malfunctions.

☞ Only use material as specified for the machine.

☞ Before start–up, ensure that no objects have been left inside the machine.

☞ The machine must be used according to the methods, times and locations as specified by national standards and legislation.

☞ Keep the floor area surrounding the machine clean at all times.

☞ When handling blades for maintenance or repairs, use suitable devices or supports to minimise the risk of injury.

☞ Wear suitable protective gloves when changing blades.

☞ Access to the electrical panel is restricted exclusively to qualified personnel.

☞ Before turning on the machine at the mains switch, ensure that the earth cable is connected correctly and that the mains is fitted with efficient earthing terminals.

☞ Never use material other than as specified in the manual, unless previously authorised by the manufacturer.

☞ Never use the machine in environments subject to the risk of explosion.

☞ All tools used on the machine must comply with draft standard prEN 847–1.

☞ In the event of maintenance or repairs to zones not accessible from ground level, use suitable means to reach parts in compliance with current safety standards.

☞ If the machine is installed in–line with other machinery, contact the manufacturer to equip the machine with suitable interlocks between the machine and for emergency shutdown.
Failure to observe the above exempts the manufacturer from liability for damage or injury to persons caused by installation in line with other machinery.

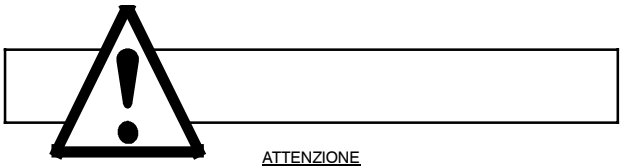
☞ Do not under any circumstances use the machine without first switching on the suction system, as the continuous presence of dust around the machine may cause serious injury to the persons working on it and prevent it from functioning correctly.

1.4. SAFETY BARIERS

BEFORE STARTING THE MACHINE, ENSURE THAT ALL SAFETY GUARDS ARE IN POSITION.

When assembly of the machine and all its components has been completed,the safety barriers must be erected around the machine. The safety barriers must prevent access to moving parts and all potentially dangerous areas of the machine

☞ **Do not go beyond the safety barriers when the machine is operating.**



ATTENZIONE
NON ENTRARE PER NESSUN MOTIVO NEL PERIMETRO DELIMITATO
DALLE BARRIERE DI PROTEZIONE CON LA MACCHINA IN FUNZIONE.

WARNING
ON NO ACCOUNT ENTER THE AREA ENCLOSED BY
THE BARRIER WHEN THE MACHINE IS IN OPERATION.

ATTENTION
IL EST FORMRLLEMENT INTERDIT DE FRANCHIR LES
BARRIERES QUAND LA MACHINE EST EN MARCHE.

LET OP!
MEN DIENT OM GEEN ENKELE REDEN VOORBIJ DEZE HEKKEN
TE KOMEN WANNEER DE MACHINE IN WERKING IS.

ACHTUNG
AUF KEINEN FALL DEN VONDEN SCHRANKEN BEGRENZTEN RAUM
BEI FUNKTIONIERENDER MASCHINE BETREN.

ATENCIÓN
MIENTRAS LAS MAQUINAS ESTEN EN FUNCIONAMIENTO
NO REBASEN LAS BARRERAS BAJO NINGUN CONCEPTO.

LET OP!
KOM, WANNEER DE MACHINE IN WERKING IS, OM GEEN
ENKELE REDEN BINNEN HET GEBIED DAT WORDT AFGEBAKEND
DOOR DE BESCHERMINGEN.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

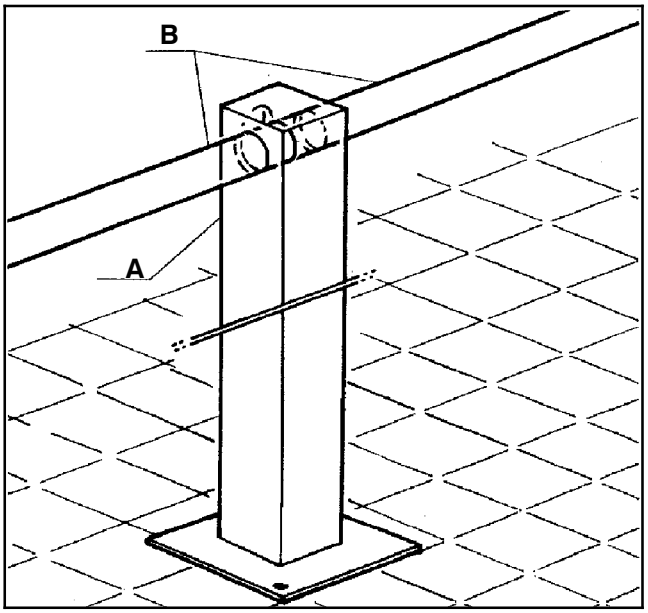
COD. AA05868.28

Safety barriers are either bars or grills.

BAR SAFETY BARRIERS

Position the supports (A) of the safety barrier following the indications given in the layout diagram.

☞ **The supports must be positioned so that there is a distance of at least 1 metre between the safety barrier and the machine.**

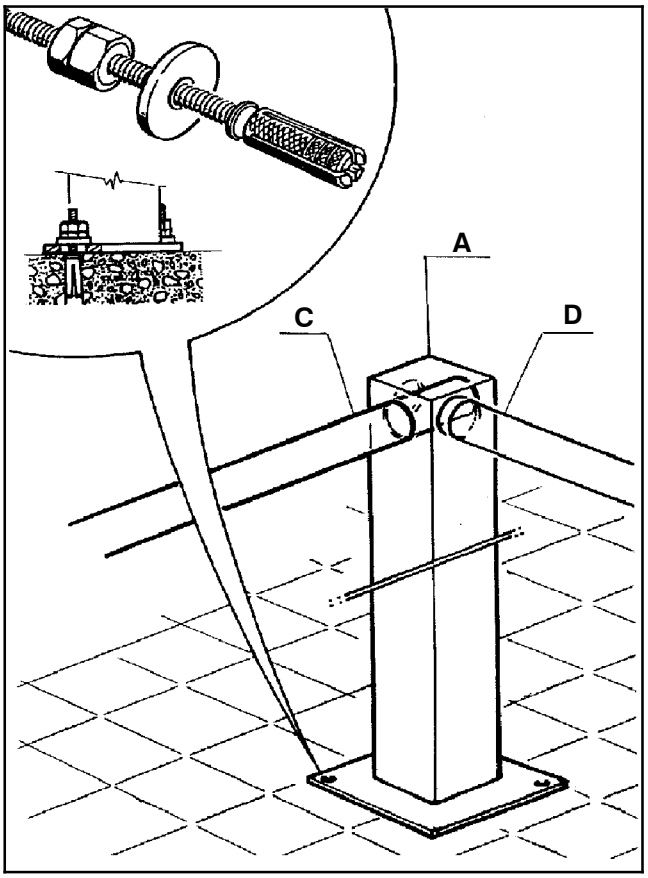


Pass the tubular sections of the safety barrier (B) through the holes in the top of the supports (A).

On the supports, first insert the tubular section (C) into the blind hole and push it against the opposite surface of the support. Then insert the tubular section (D) through one of the through holes and push it against the tubular section (C).

On end supports, pass the tube through the blind hole and then push it against the opposite surface of the support.

Once you have assembled all components of the safety barrier, fix the assembly to the floor. Drill holrs in the floor under the holes in the support plates and then fix the supports in position using the expanding bolts provided. Tighten the nuts on the expanding bolts.



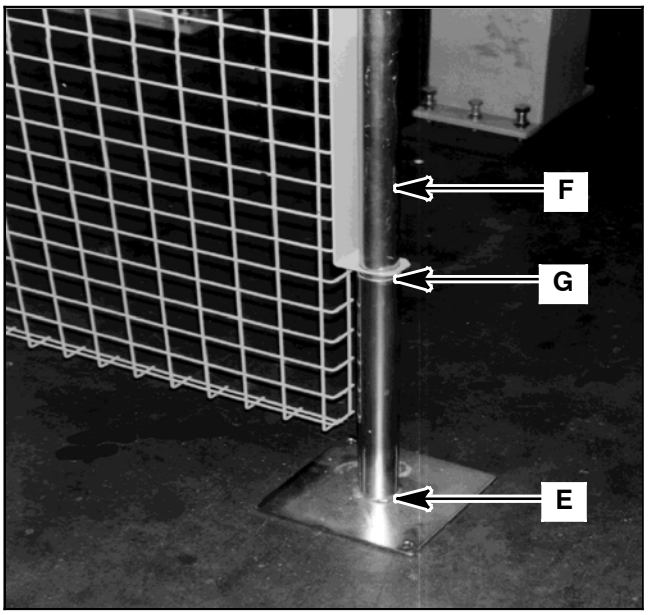
N.B. The ground fixing shown in the diagram is intended as an example only. ground fixing is the customer's responsibility.

GRILL SAFETY BARRIER

Position the support feet (E) along the perimeter of the area to be cordoned off following the layout diagram.

First, insert the tubes (F) inside the support feet and then mount the grills by passing the tubes through holes (G) in the grills.

Once you have assembled all components of the safety barrier, fix the assembly to the floor. Drill holes in the floor under the holes in the support plates and then fix the supports in position using the expanding bolts provided. Tighten the nuts on the expanding bolts.



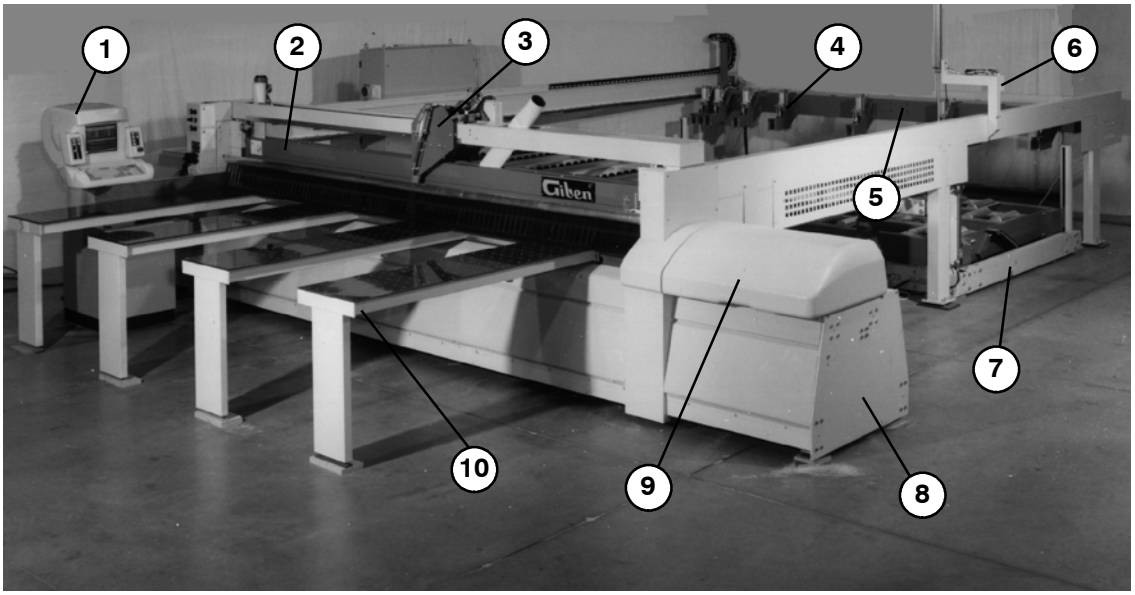
Mushroom–head emergency stop pushbuttons are positioned at the service entrances in the safety barriers. Check the operation of these pushbuttons at regular intervals by following the instructions given in chapter 8.1.

N.B. The ground fixing shown in the diagram is intended as an example only. ground fixing is the customer's responsibility.

BEFORE STARTING THE MACHINE, ENSURE THAT ALL SAFETY GUARDS ARE IN POSITION.

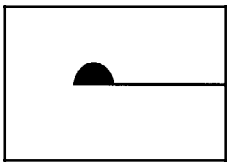
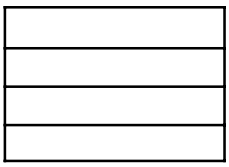
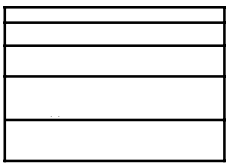
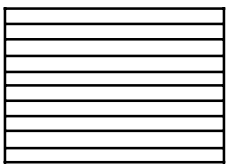
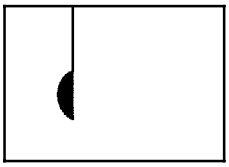
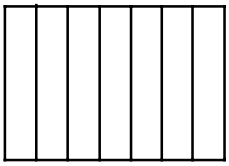
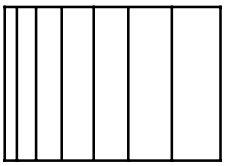
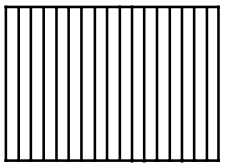
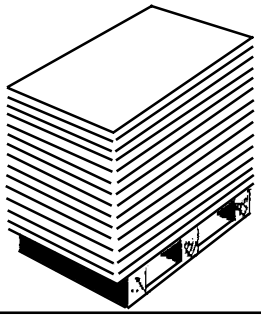
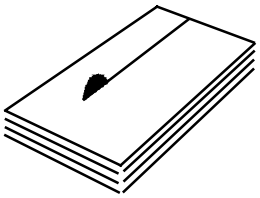
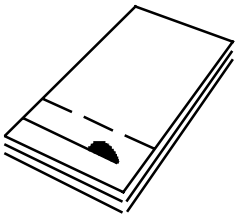
2. DESCRIPTION OF THE MACHINE

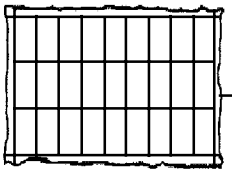
2.1. GENERAL DESCRIPTION

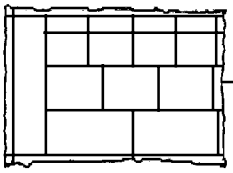


1) ELECTRIC PROGRAMMER
2) PRESURE BEAM
3) SIDE ALIGNING DEVICE
4) PNEUMATIC GRIPPERS
5) PUSHER
6) ELECTRONIC COUNTER UNIT
7) LIFTING TABLE
8) TRAVERSE UNIT
9) SAW CARRIAGE
10) AIR CUSHION TABLES

2.2. TERMINOLOGY

Length cutting	Length cutting of the same measurement	Length cutting of different measurements	Length strip cutting
			
Cross cutting	**Cross cutting of the same measurement**	**Cross cutting of different measurements**	**Cross strip cutting**
			
Trim cuts and squaring	**Pile of panels**	**Stack of panels**	**One or more head cuts** (shortening panel length before starting cutting pattern)
			





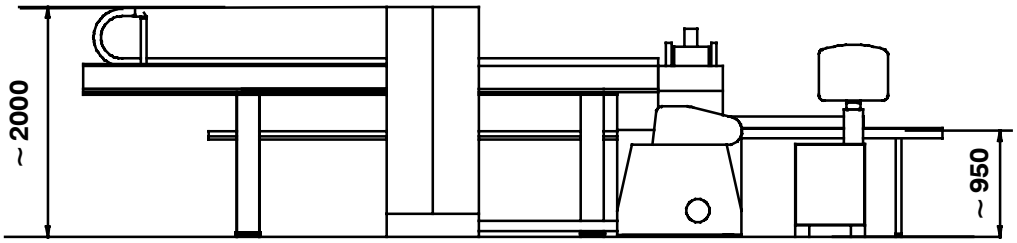
LOGICAL CUTTING PATTERN

OFF–SET CUTTING PATTERN

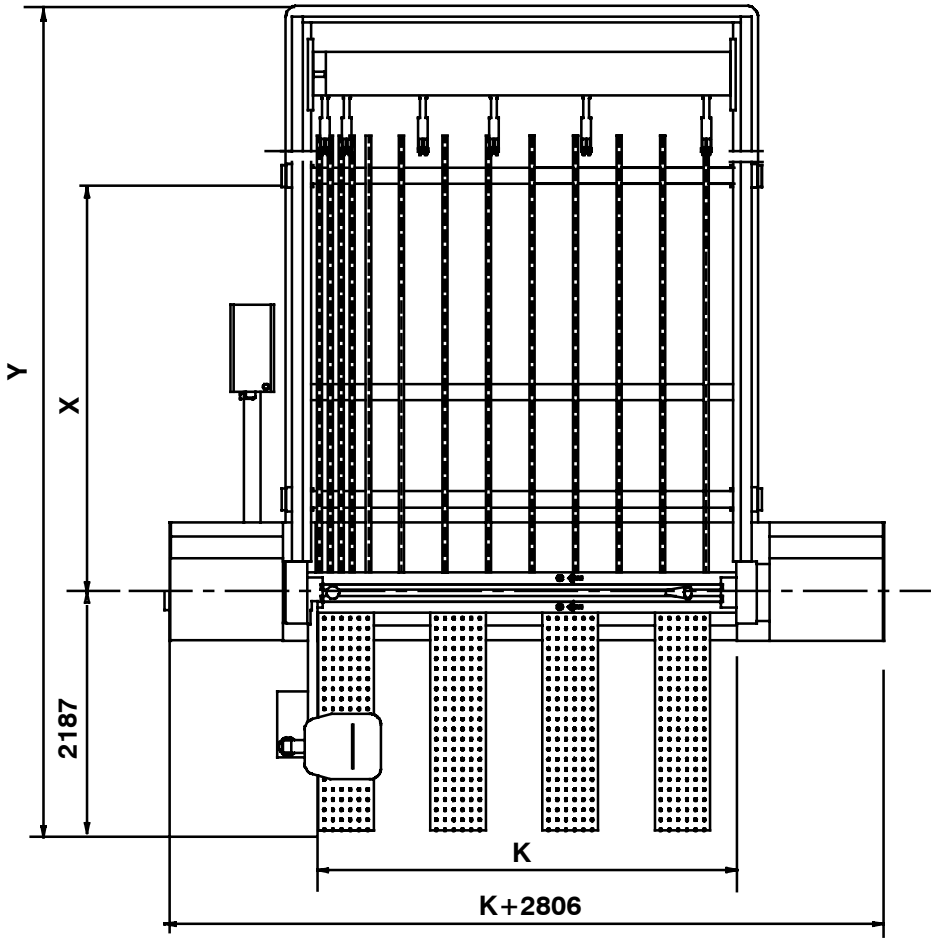
Length cutting
+
Cross Cutting
=
SUBMULTIPLES

3. TECHNICAL DESCRIPTION

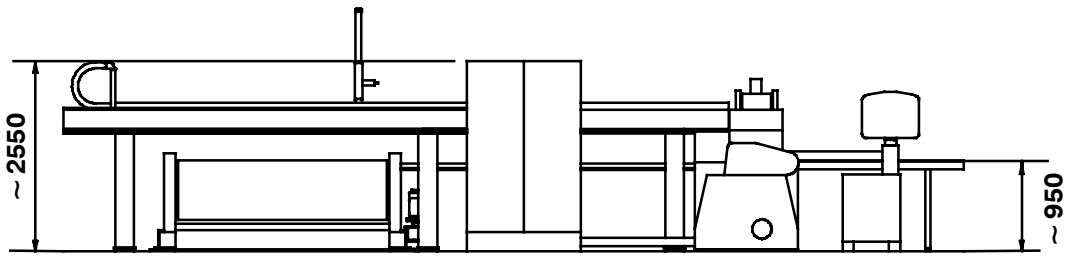
3.1. MODEL SP OVERALL DIMENSION



K	X	Y
2200	3350	6772
3300	3350	6772
3800	3350	6772
	4050	7472
4500	4050	7472
	4550	7972
5700	5800	9222

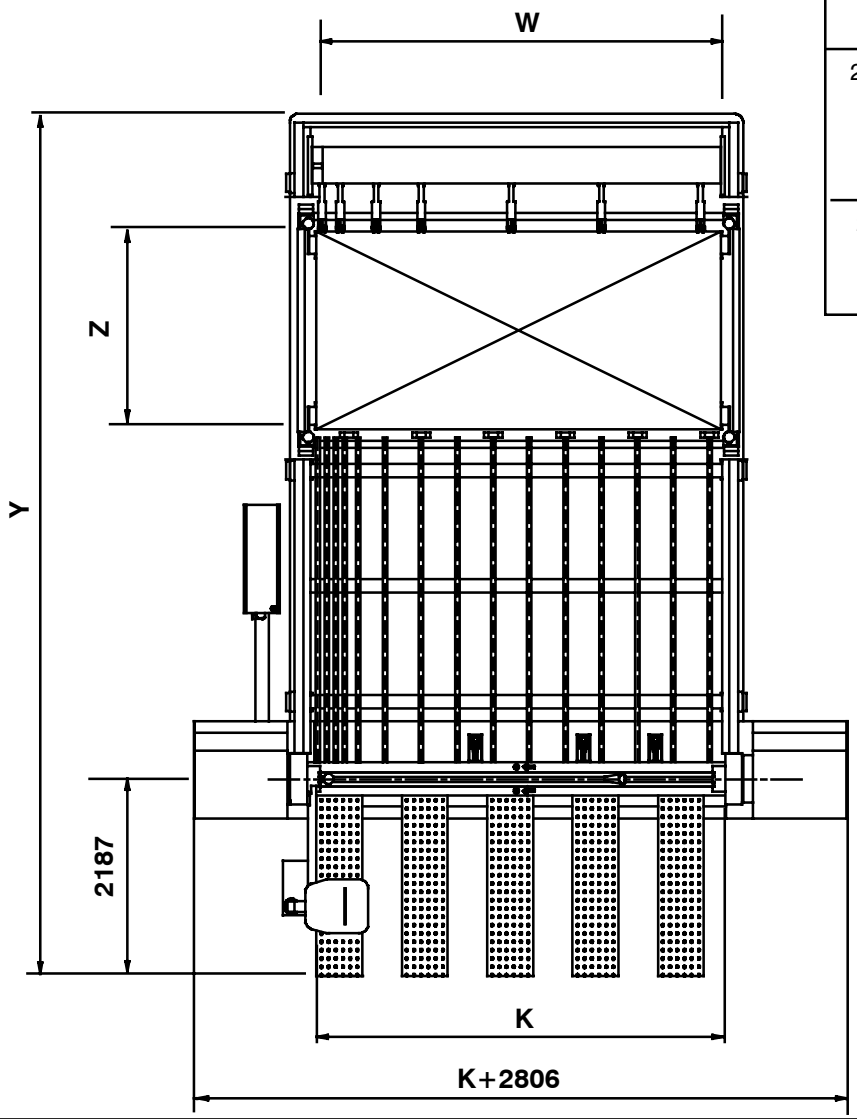


3.2. MODEL SPT OVERALL DIMENSION

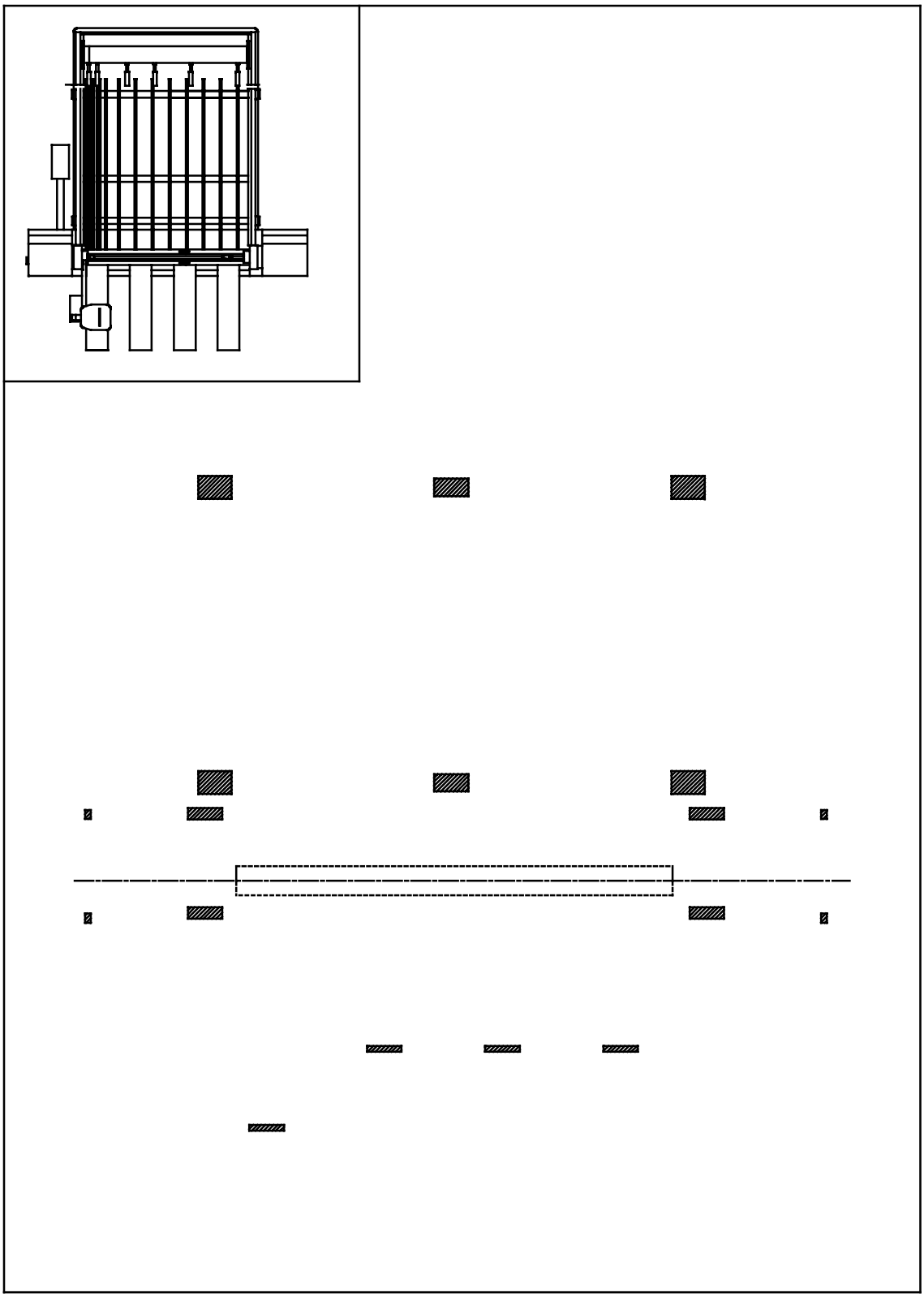


K	Z	Y
3300	1600	8172
3800	1600	8172
	2200	8672
4500	1600	8672
	2200	9472
5700	2200	11322
	2700	11822

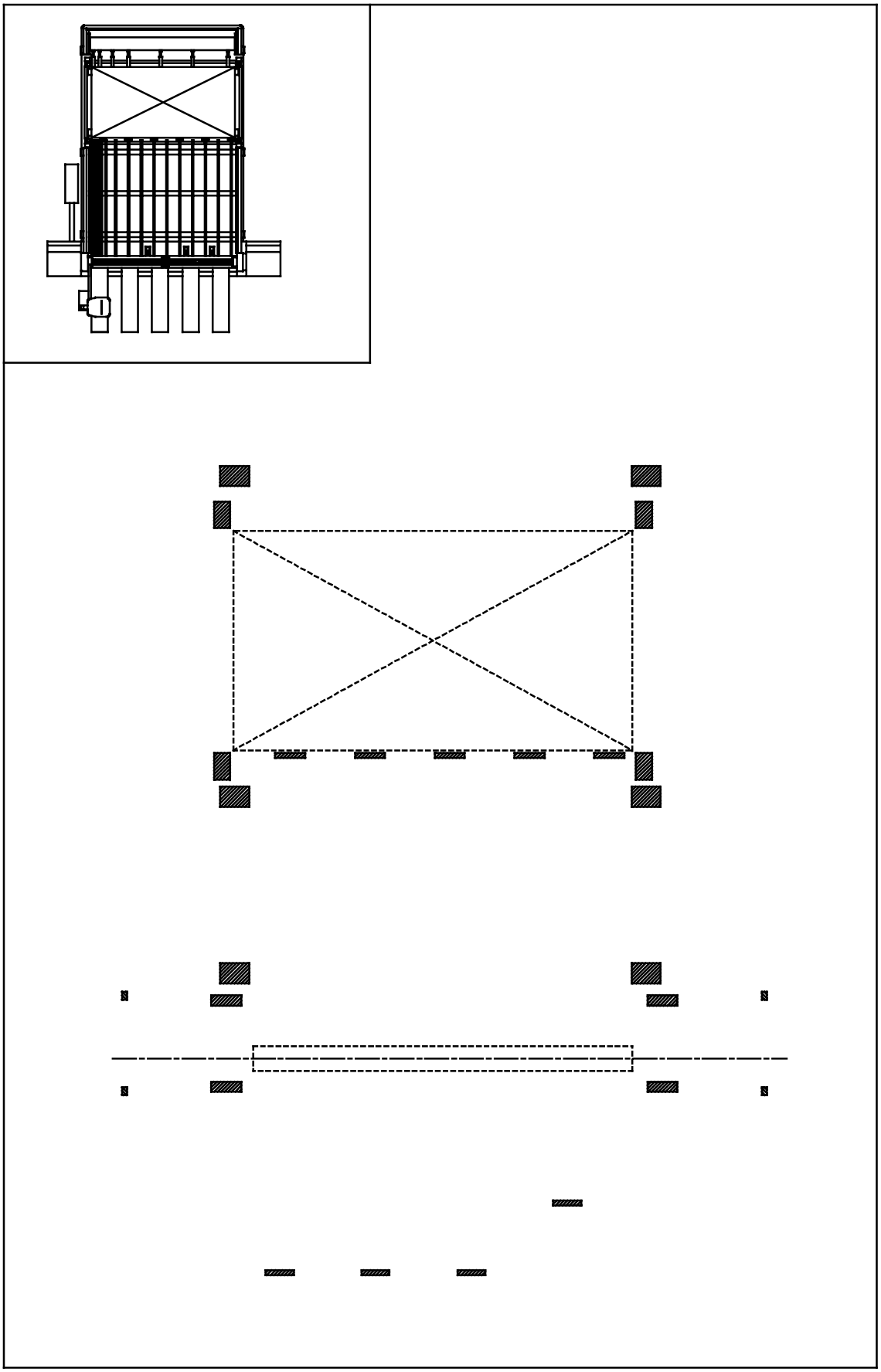
Z	W
1600	3500
	4000
	4500
2200	3500
	4000
	4500
	5700
2700	4000
	4500
	5700



3.3. PRISMATIC SP SUPPORT POINTS



3.4. PRISMATIC SPT SUPPORT POINTS



3.5. GENERAL TECHNICAL SPECIFICATIONS

CUTTING AREA ..... 3300 – 3800 – 4500 – 5700 mm

PUSHER BEAM ..... 3350 – 4050 – 4550 – 5800 mm

BLADE PROTRUSION ..... 100 mm (ø 400 mm)
..... 115 mm (ø 430 mm)

GRIPPERS OPENING ..... 117 mm

MINIMUM SAWING WIDTH ..... 70 mm

BLADES

☞ When handling blades for maintenance or repairs, use suitable devices or supports to minimise the risk of injury.

☞ When choosing blades, observe the maximum speed as specified by the manufacturer on the main body of the blade. Use of blade diameters exceeding that of the original supply is strictly prohibited, as indicated on the machine.

	MAIN BLADE		SCORING BLADE		
Diameter ext. (mm)	**400**	**430**	**215**	**300**	**300**
Diameter int. (mm)	75	75	50	50	50
Teeth width (mm)	4,4	4,4	4,4	4,4	4,2–4,6
Body thickness (mm)	3,2	3,2	3,2	3,2	2x1,8
N° of teeth	72	96	42	48	2x32
N° of drive holes	4	4	3	3	3
Drive hole diameter (mm)	15	15	15	15	15
Drive hole centre distance (mm)	105	105	80	80	80
Drive hole layout	90°	90°	120°	120°	120°
turn./min. 50 Hz	3754	3491	5034	5034	–
turn./min. 60 Hz	3830	3510	5079	6040	–

DUST EXTRACTION			
Diameter (mm)	**Speed (m/sec)**	**Flow rate (m_3/h)**	**Pressure drop (mm w.g.)**
115	30–35	1215	110–150
200		3675	150–200

ABSORBED POWER FOR 400 VOLT			
Motor (Kw)	**Absorb. (A)**	**Motor (Kw)**	**Absorb. (A)**
50 Hz		**60 Hz**	
7.5	14	9	16
11	16	13.2	19
13.2	19	15.9	22

COMPRESSED AIR

– Pressure . . . . . 5 – 6 bar
– Volume . . . . . 20 – 30 l / min.

SAW BLADE CARRIAGE

– Feed speed . . . . . 0 – 130 m / min.
– Return speed . . . . . 130 m / min.
– Traversing motor (BRUSHLESS) . . . . . 4,5 Nm

WARNING!
The maximum forward speed (cutting speed) at witch the saw carriage shall be operated is determined by the type and density of the material being cut, by the height of the book, by the type of blade being used and by it's degree of sharpness.
The speeds technically attainable by the machine may be excessive given the above mentioned limiting factors, and may result in damage to equipment and/or injury to personnel.
In determining the most appropriate saw carriage feed speed please refer to the recommendations of your blade manufacturer.

PUSHER

– Fast feed . . . . . 1–30 m / min. *****
– Return . . . . . 70 m / min.
– Traversing motor (BRUSHLESS) . . . . . 6,5 Nm

*****(1–25) EC standards governing max. speed as specified in prEN 1870.2

WARNING!
The maximum forward speed at which the pusher can operate is technically attainable however, it is factory at 25 meters/minute for safety reasons.
The maximum forward speed can only be used with automatic off–loading systems that do not require any manual intervention.
Failure to operate the machine within these limits may result in damage to equipment and/or injury to personnel.

THE MACHINE HAS BEEN DESIGNED FOR THE HANDLING, ALIGNMENT AND CUTTING OF RIGID MATERIALS, RESISTANT TO FRONT OR LATERAL PRESSURE: SINGLE SHEETS OR STACKS OF PLAIN OR LAMINATED CHIP BOARD, FIBRE BOARD, MDF, LAMINATE OR PLASTIC MATERIALS. MAKE SURE THAT THE MACHINE IS USED IN COMPLIANCE WITH THE OPERATIONS AND LIMITS ILLUSTRATED IN THE ABOVE TECHNICAL DATA.

3.6. PRISMATIC WEIGHT

The following tables indicate the approximate weight of the Prismatic models SP and SPT (T.2700 mm) in relation to the possible cutting capacity (K).

K	Mod.SP [Kg]	Mod.SPT [Kg]
1600	4680	–
2200	5000	–
3300	5590	9950
3800	5860	9980
4500	6240	10920
5700	7150	14660

Maximum weights to observe when handling or lifting auxiliary parts are specified below. These weights refer to a Prismatic panel saw with loading from table and 5700 mm cutting width.

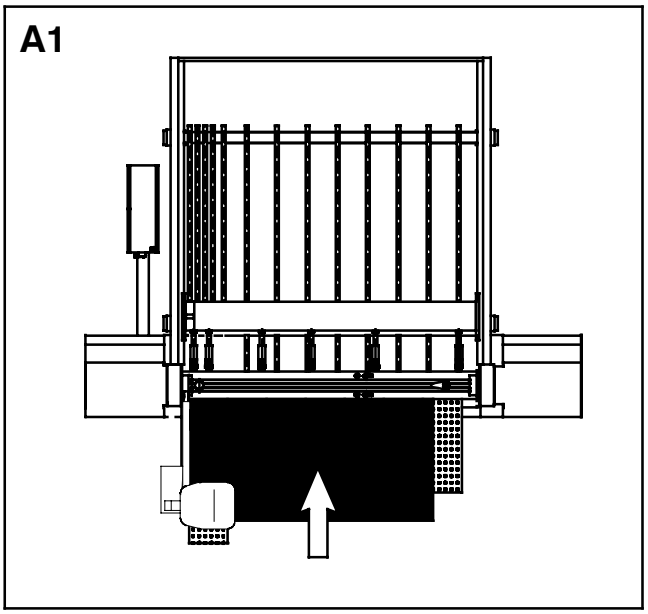
Lifted part	**gross weight (kg)**
panel saw	4.200
mobile table section	1.150
fixed table section	882
pusher guide	378
pre–loading rollerway	134
electrical cabinet	386
monitor enclosure	162
generator carton on pallet	65
accessory box	48
accessory crate	2.460
accessory crate	1.120
protection mesh pallet	195
protection mesh straps	97

3.7. PRISMATIC SP OPERATING CYCLE

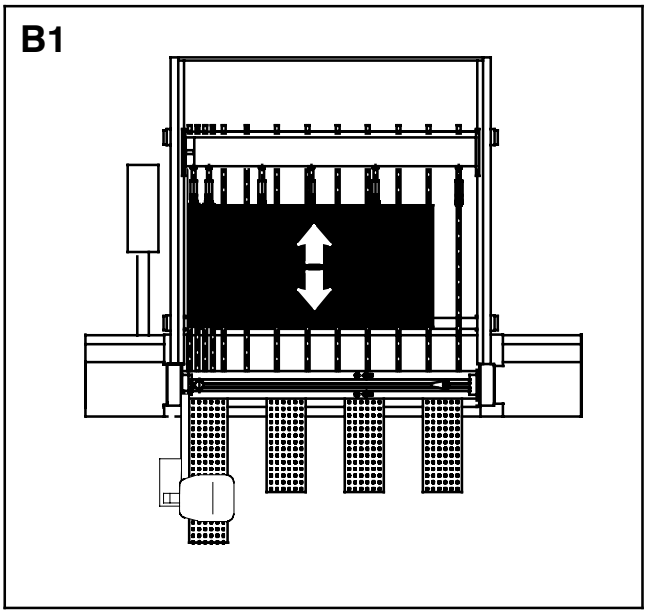
☞ Wear suitable gloves when loading, handling and unloading material.

Prismatic SP is a single–blade panel saw for cutting chipboard panels, plastic laminates and other materials, in single sheets or in stacks.

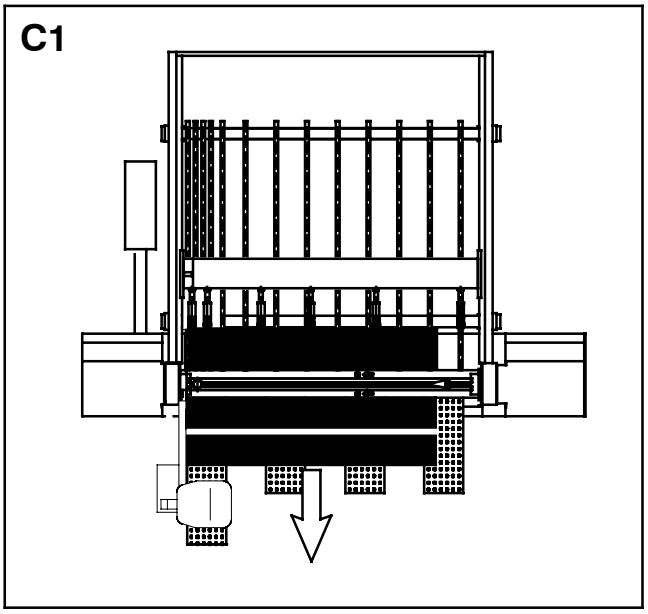
A1: The operator (at the front of the machine) pushes the stack for cutting set on the front table of the machine against the clamps of the pusher, which is positioned along the cutting line.



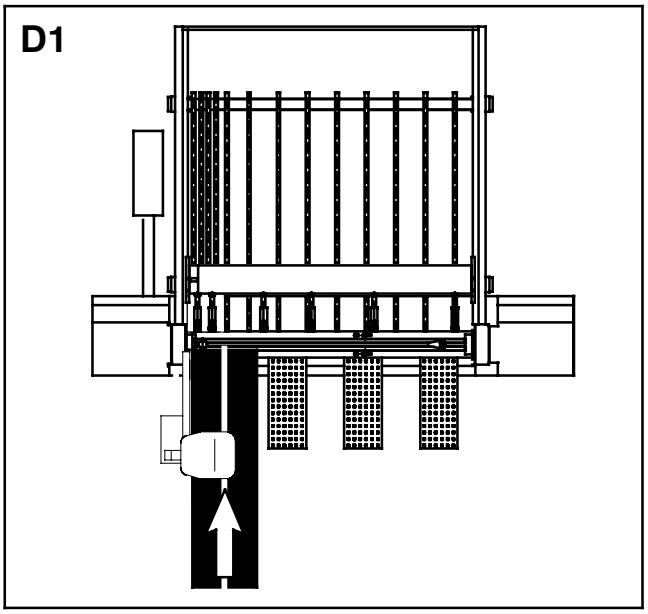
B1: After clamping the material, the pusher moves back, carrying the stack for cutting over the cutting line. An automatic device stops the reverse run of the pusher as soon as the material has completely crossed the cutting line.



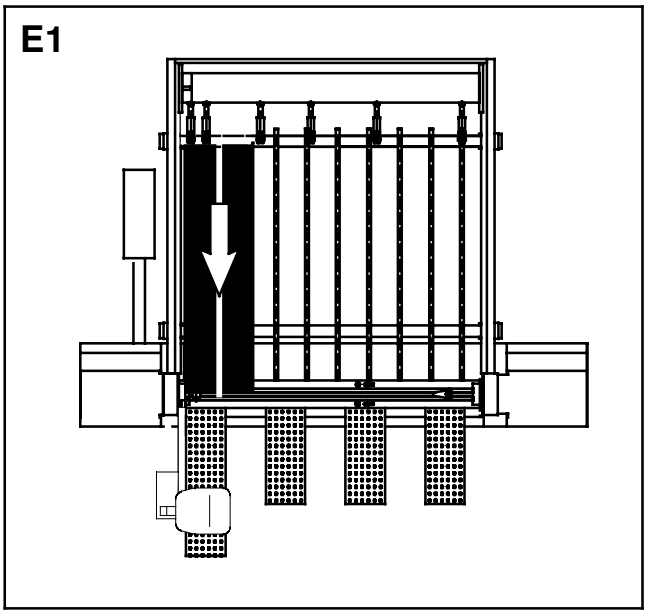
C1: The operator (at the front of the machine) pushes the stack for cutting set on the front table of the machine against the clamps of the pusher, which is positioned along the cutting line.



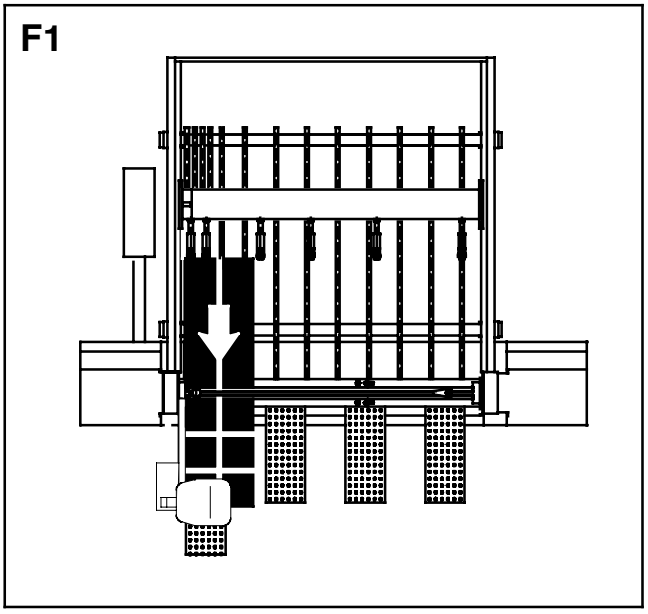
D1: After clamping the material, the pusher moves back, carrying the stack for cutting over the cutting line. An automatic device stops the reverse run of the pusher as soon as the material has completely crossed the cutting line.



E1: After clamping the material, the pusher moves back, carrying the strips over the cutting line. The count start device stops the return stroke of the pusher once the material has completely passed the device.



F1: The pusher will then perform the crosscutting cycle, in the same manner as the longitudinal cycle described above.
A manually – operated side pneumatic alignment device clamps the strips to the 90° guide fence.

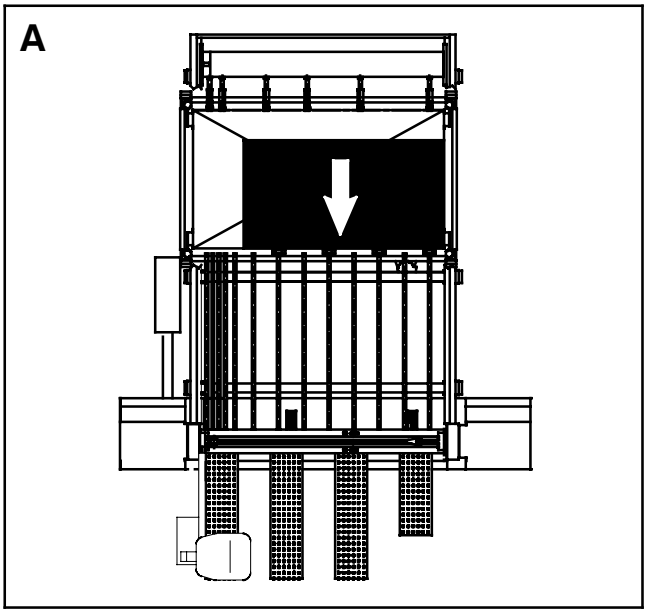


3.8. PRISMATIC SPT OPERATIONAL CYCLE

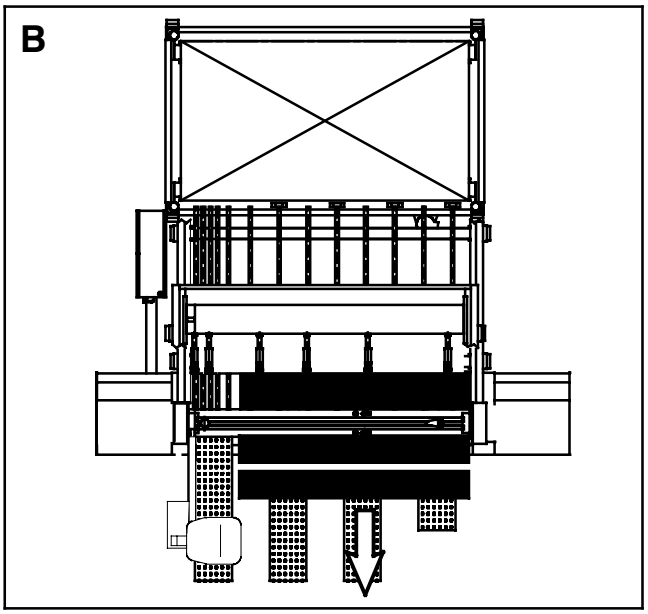
☞ Wear suitable gloves when loading, handling and unloading material.

Prismatic SPT is a single–blade panel saw for cutting chipboard panels, plastic laminates and other materials, in single sheets or in stacks.
The work cycle consists in longitudinal followed by cross cuts. The machine is designed to cut panels of commercial dimensions to the desired size.
One or more panels may be cut on the panel saw during the same work cycle.

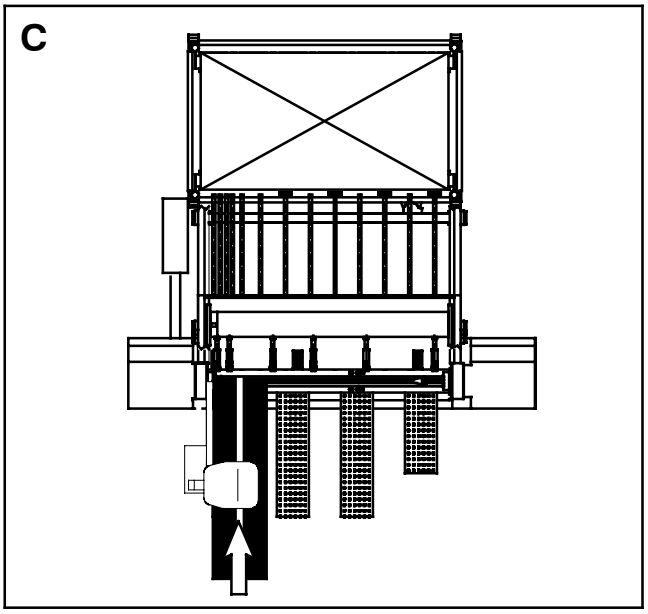
A: The pusher takes over the stack for cutting from the lift table. When the material arrives on the table, it is immediately aligned and clamped.



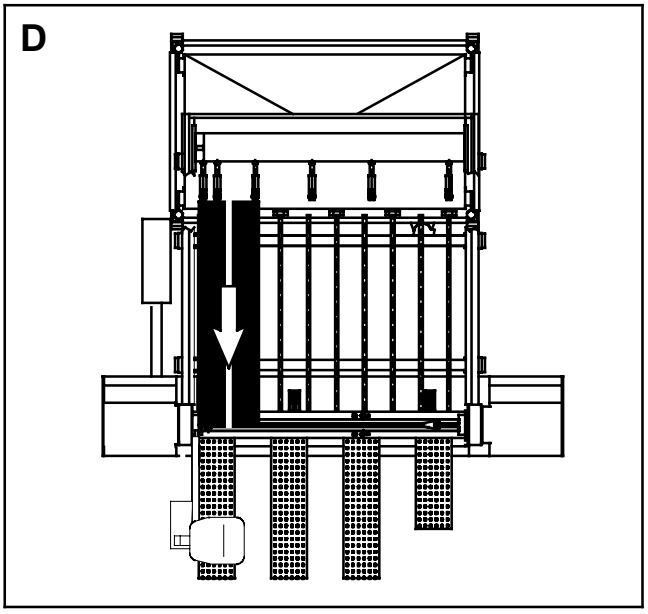
B: The pusher then moves forward according to the preset program, stopping and measuring the panels for longitudinal cutting. The stack remains clamped for the duration of longitudinal cutting, until the pressure beam descends for the last cut.



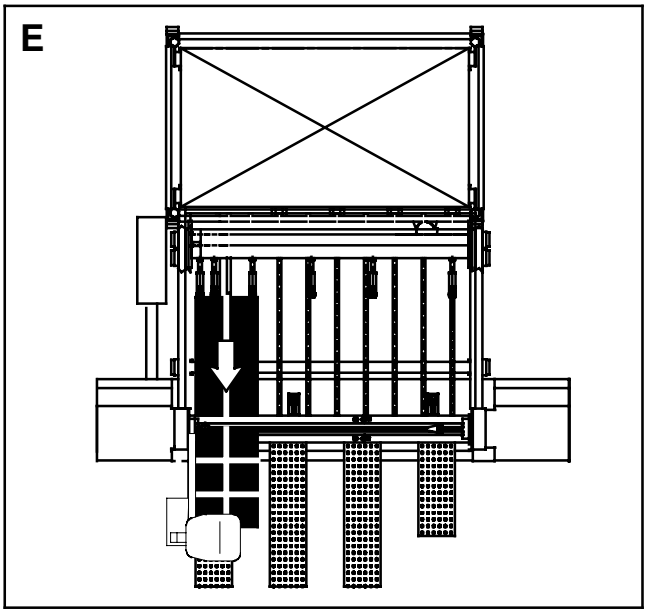
C: At the end of the cycle, the pusher stops on the cutting line, instead of returning to the rear limit switch.
The operator (still positioned in front of the machine) moves the cut pieces against the fence, pushing them against the transverse clamps.



D: After clamping the material, the pusher moves back, carrying the strips over the cutting line. An automatic device stops the return stroke of the pusher as soon as the material has completely passed the device.



E: The pusher will then perform the crosscutting cycle, in the same manner as the longitudinal cycle described above.A side pneumatic alignment device clamps the pieces to the 90° guide fence.



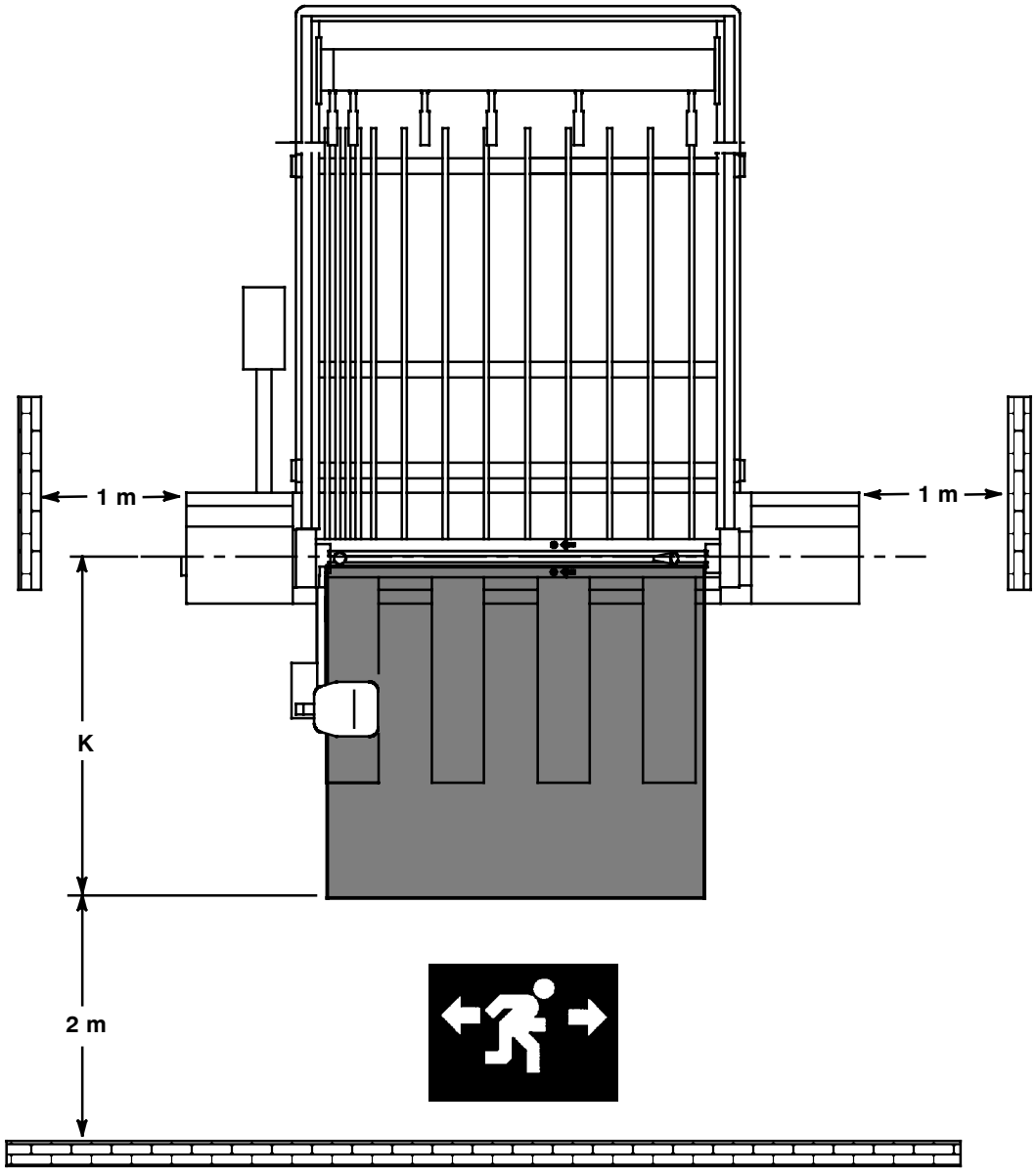
3.9. PAINT COLOURS

Two colours are prevalently used on GIBEN machines: turquoise (RAL 5018), used to identify moving parts (e.g. aligner, clamps, lift table, etc.) and light grey (RAL 7035) to indicate fixed parts (guards, base, etc.).

3.10. SAFETY AREA

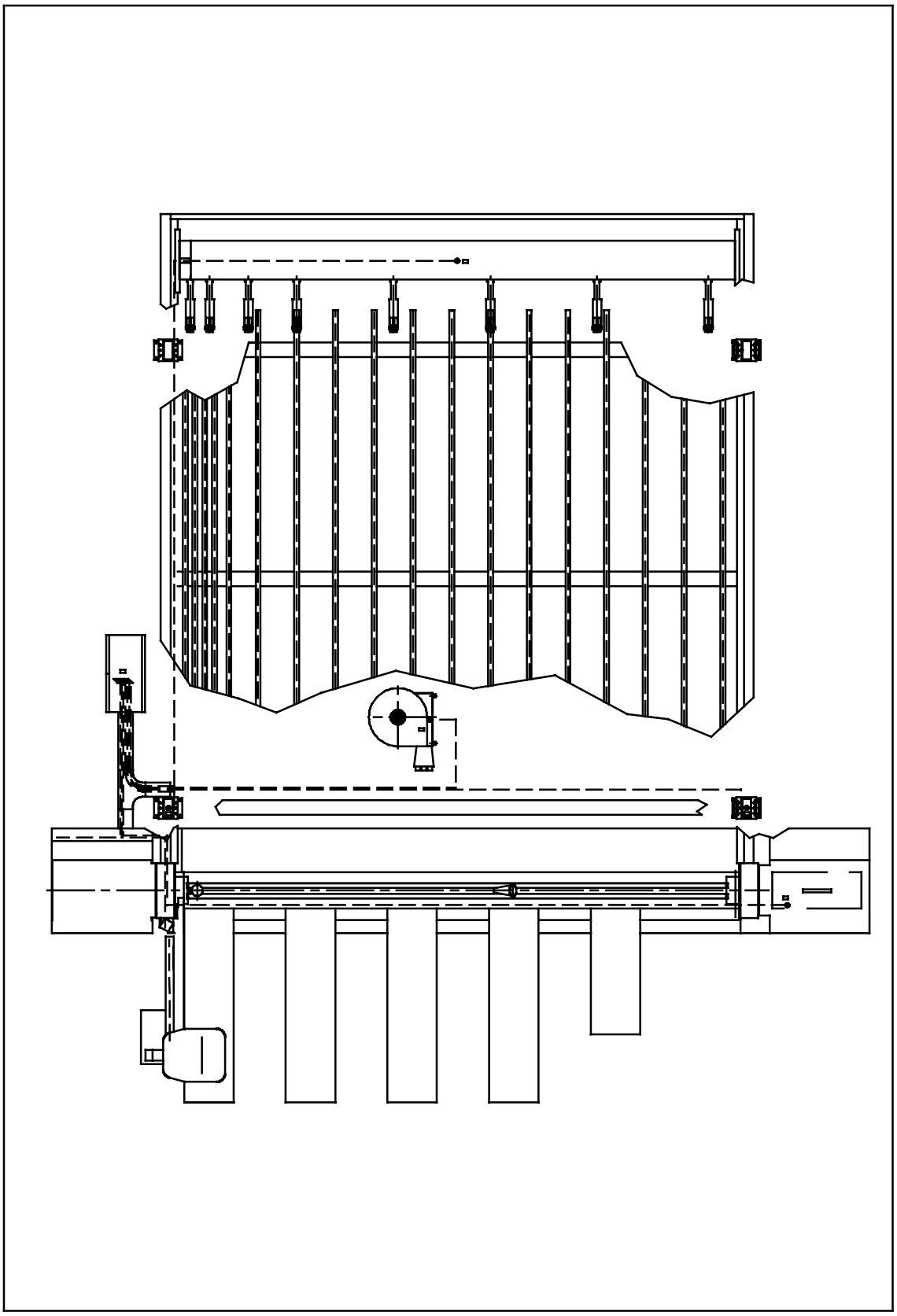
In the interests of worker safety, it is essential that no obstacle of any kind (e.g. other machinery, devices, containers, materials, etc.) hamper the panel outfeed zone of the saw.
To this end, make sure an area in front of the panel saw equal to the maximum dimension of the panel being cut (K) plus two metres (see figure) is kept clear.
Keep a minimum area of 1 m clear to the sides of the panel saw to facilitate adjustment or servicing operations.

These distances ensure a safety zone and emergency exit area, required to guarantee correct machine operation.



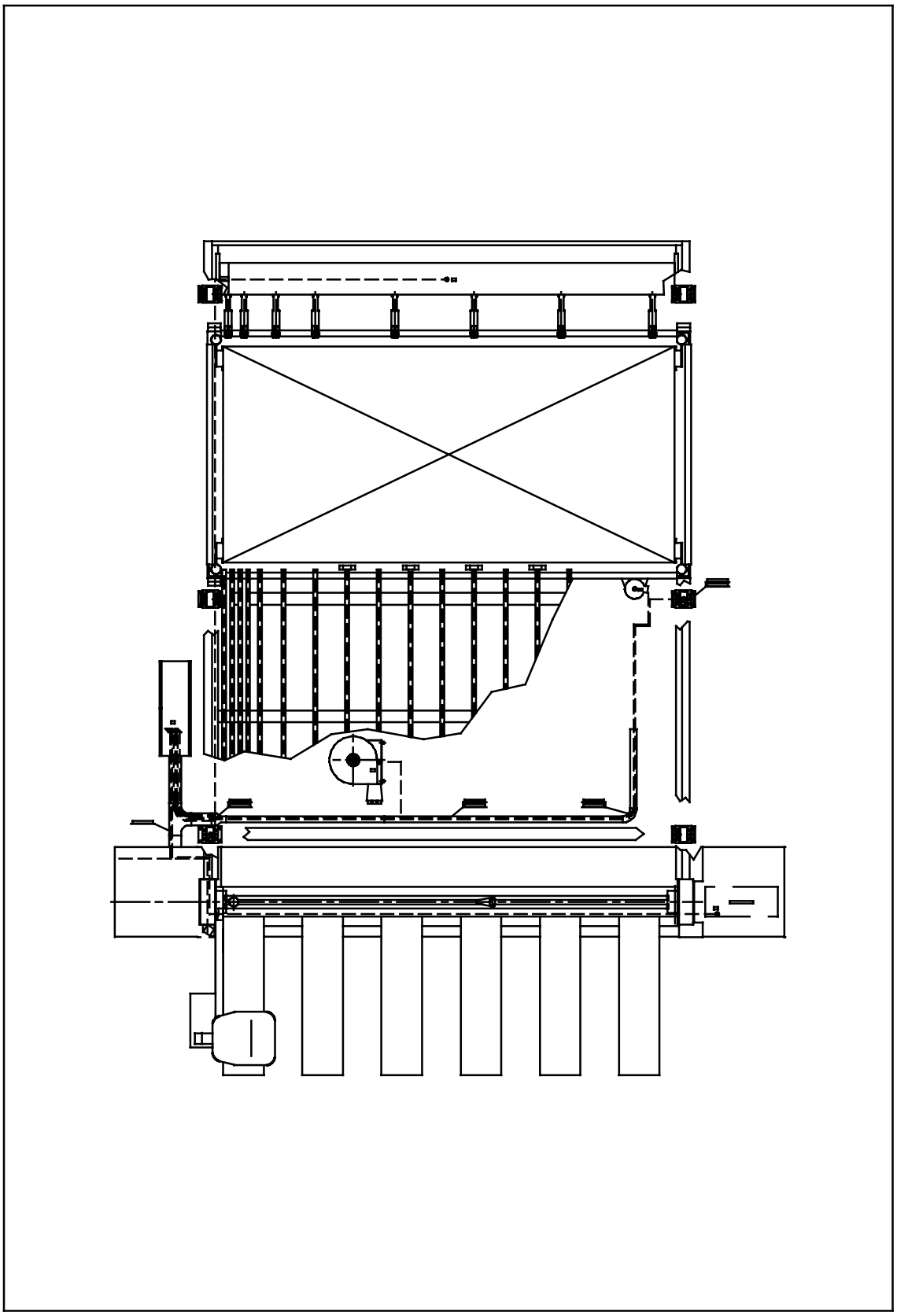
3.11. MODEL SP ELECTRICAL CONNECTIONS

Diagram of Prismatic2 mod. SP electrical and earth connections.



3.12. MODEL SPT ELECTRICAL CONNECTIONS

Diagram of Prismatic2 mod. SPT electrical and earth connections.



4. CONFORMITY TO STANDARDS DOCUMENTATION

4.1. DUST EMISSION

Document issued by the University of Stuttgart.

ISTITUTO DI RILEVAZIONE EMISSIONE POLVERI PRESSO IFW, UNIVERSITA' DI STOCCARDA

EMISSIONE POLVERI

Produttore: Giben — Macchina, tipo Sezionatrice Prisma 2 G-Drive
Matricola 001.9.124 — Anno di costruzione 1992

DESCRIZIONE DEGLI UTENSILI
(materiale, dimensioni, nr. tagli, stato di affilatura)

	GIRI/MIN
Lama circolare principale, dente piatto trapezoidale, dia. 430 x 4,4 mm, nr. 96, affilatura nuova	3465
Lama incisore circolare, 2 x (dia. 300 x 2,6 mm, nr. 32) affilatura nuova	5035

MATERIALE	DIMENSIONI	UMIDITA'
Truciolare	1500 mm, h=3x19 mm	7,4%

COLL. ASP.	PRESSORE	SQUADRO	CARRO LAME	MEDIA ARITM.
Diametri	115	115	200	**********
Vel. media aria m/sec	16,1	18,6	17,9	17,5
Sottopress. (Pa)	1010	1115	1345	1157
Vol. aria m3/h	602	696	2024	tot. 3322

LUOGO DI RILEVAZIONE	OFFICINA DIM. 12 000 M3	CAMBIO ARIA 0,28
RILEVAZIONE:	SECONDO LE NORME (x)	
	ALTRE CONDIZIONI ( ) (vedi schizzo)	
APPARECCHIO:	VC25	NR. 3
LAYOUT (o schizzo) A NORME		
AVANZAMENTO	15 M/MIN	
DURATA RILEVAZIONE	45 MIN	
TEMPO DI MISURAZIONE	0,22	
QUANTITA' SEZIONATA	37 621 CM3	
GIRI UTENSILE	100	

VALORIZZAZIONE

PUNTO RILEV.	MIS. NR. 1	NR. 2	NR. 3	EMISSIONE MG/M3
1	20206/0,46	18380/0,36	18174/0,50	0,56
2	18150/0,17	18240/0,28	18327/0,28	0,35
3	20117/0,18	21226/0,21	18270/0,62	0,75

4.2. NOISE EMISSION

☞ Always use ear protectors

As required by the machinery directive, we have carried out sound level tests on Prismatic2 section switches in compliance with EN ISO 3746 standard.
When the constant K has a value of 8,4 dB(A), sound pressure is LpA 79 dB(A).

The specified noise values refer to noise emission and not necessarily work safety levels.
While emission levels and exposure levels are correlated, they may not be used as the basis for determining whether further precautions are required.
The factors that influence the actual level of exposure of the operator include the duration of exposure, characteristics of the environment, and other sources of emission, for example the number of machines and other devices installed in the vicinity of the panel saw. Admissible exposure levels can also vary according to the country of installation.
However, this information enables the user to judge the relative hazards and risks associated with this machine.

N.B. If controls are required regarding the accuracy of declared emission values, measurements must be taken using the same methods and oiperational conditions as used in testing.

4.3. EEC CERTIFICATES

This machine must not be placed into operation until the manufacturer issues a declaration of conformity to the requirements of the EC Machinery Directive.
If this prescription is not observed, GIBENIMPIANTI declines all liability for any accidents or damages that may occur in relation to the machine.

The following certificate is a facsimile of the original issued by the Certification Institute to confirm compliance with the requirements of Machinery Directive – Prismatic Spt.

ISTITUTO CERTIFICAZIONE EUROPEA srl

ICE - *Istituto Certificazione Europea S.r.l.*

Viale Lenin, 49 - 40138 Bologna, Italia
Tel. (051) 53 34 79, fax (051) 53 38 84
International: Tel. (+39.51) 53 34 79, fax (+39.51) 53 38 84

Unione delle Comunità europee - Direttiva del Consiglio n. 89/392/CEE 'macchine'.

Attestato di esame CE del tipo n. 01240/97

Macchine comprese nell'Allegato IV.

CE Type-examination Certificate - Machines Included in Annex IV of Directive 89/392/EEC and Amendments.

A seguito di esame del tipo condotto secondo le prescrizioni dell'Allegato VI della Direttiva 89/392/CEE e successive modificazioni, l'ICE srl, organismo notificato n. 0303 per le direttive stesse,

certifica che :

Following type-examination conducted in accordance with Annex VI, ICE, notified body n. 0303 for the above directives, hereby certifies that :

La macchina tipo : **SEZIONATRICE ORIZZONTALE** (punto1.4 dell'Allegato IV)
Machine Type : *HORIZONTAL PANEL SIZING SAW*

Modello : **PRISMATIC 2 SP**
Model and description: Motore : 380/415 V - 50 Hz Matricola : 461.96.380
Dimensione d'ingombro :
Lunghezza da 6772 a 9222 mm
Larghezza da 5006 a 8506 mm - h. 2000 mm
Diametro lama principale : da 400 mm @ 3800 min^{-1} a 430 mm @ 3480 min^{-1}
Diametro Lama incisore : 215 mm Larghezza di taglio : 4,4 mm

Fabbricata da : **GIBEN IMPIANTI S.p.A.**
Manufactured by : Via Garganelli, 24 - 40065 Pianoro (BO) - Italia

Che ne ha fatto domanda il (*As per the request dated*) : 1997/04/18 (A/M/G)

Ulteriormente descritta da : Vedi pagina seguente del certificato
Further described by : Attached drawing in the next page

E alle seguenti condizioni : Nel rispetto delle prescrizioni di installazione descritte nelle istruzioni.
And subject to the following conditions : Provided the instructions for installation are duly followed.

è conforme ai requisiti di sicurezza e di salute oggetto della Direttiva.

Il certificato è valido in unione alle condizioni generali riportate al verso e agli eventuali allegati indicati.

complies with the health and safety provisions of Council Directive 89/392/EEC and its amendments.
This certificate is only valid in conjunction with the general conditions listed overleaf and any enclosures listed above.

Bologna, 1997/04/30

ICE - Istituto Certificazione Europea S.r.l.
Alfredo Angrisani
(Ing. Alfredo Angrisani)
Il responsabile della certificazione

Sede legale: Via Bentini, 9 40013 Castel Maggiore (Bologna) Italia - Registro Società Tribunale di Bologna N. 54987 - Partita IVA: IT 00587601204

Document issued by the Italian ICE (European Certificates Institute) Prismatic Sp.

ICE - *Istituto Certificazione Europea S.r.l.*
Viale Lenin, 49 - 40138 Bologna, Italia
Tel. (051) 53 34 79, fax (051) 53 38 84
International: Tel. (+39.51) 53 34 79, fax (+39.51) 53 38 84

Unione delle Comunità europee - Direttiva del Consiglio n. 89/392/CEE 'macchine'.

Complemento n. 01 all'attestato CE di tipo numero :
Complement to CE - type examination certificate no.

01240/97

Relativo alla macchina modello : **SEZIONATRICE ORIZZONTALE**
HORIZONTAL PANEL SIZING SAW
PRISMATIC 2 SP

Fabbricata da : **GIBEN IMPIANTI S.P.A.**
Via Garganelli, 24 - 40065 Pianoro (BO) - Italia

A seguito di esame CE di tipo condotto secondo le prescrizioni dell'Allegato VI della Direttiva 89/392/CEE e successive modificazioni, l'ICE srl,
Following CE - type examination conducted in accordance with Annex VI, ICE, hereby certifies that the subject machine, modified as described hereafter:

certifica che la macchina in oggetto integrata come segue :

CON TAVOLA DI ALIMENTAZIONE DELLE DIMENSIONI DESCRITTE NELLA PAGINA SEGUENTE, E DENOMINATA PRISMATIC 2 SPT

rimane conforme ai requisiti essenziali di sicurezza e di salute oggetto della Direttiva.
Il complemento è valido in unione all'attestato originale ed è soggetto alle limitazioni e prescrizioni in esso indicate.
remains compliant with the Directive's health and safety provisions.
This complement is only valid in conjunction with the original certificate, and is subject to the same conditions and limitations described in it.

Bologna, 1997/04/30 (A/M/G)

ICE Istituto Certificazione Europea S.r.l.
Ing. Alfredo Angrisani
Il responsabile della certificazione

5. INSTALLATION

5.1. WARNINGS

☞ When lifting the machinery, use suitable equipment (bridge crane, lift truck, ropes) with sufficient capacity.ne Capacity must be greater than the weight of the part to be handled (see tables, CHAP. 3.6.).
Handling must be carried out exclusively by suitably trained personnel.

☞ Ensure that no persons are in the vicinity of the suspended load, or the working area of the crane, lift truck or other lifting/handling equipment.

☞ Machine lifting must be carried out in strict observance of all safety standards and precautions to avoid the risk of damage or physical injury.

☞ Avoid use of lift trucks for lifting and handling the panel saw when a crane or bridge crane is available.

☞ Before lifting or moving the panel saw, lock the blade carriage in alignment with the centre of gravity of the machine, following the procedure in chapter 5.6 in reverse order. The blade carriage is locked in position prior to delivery from the factory and must be locked prior to any further handling operations.

5.2. MACHINE WEIGHT

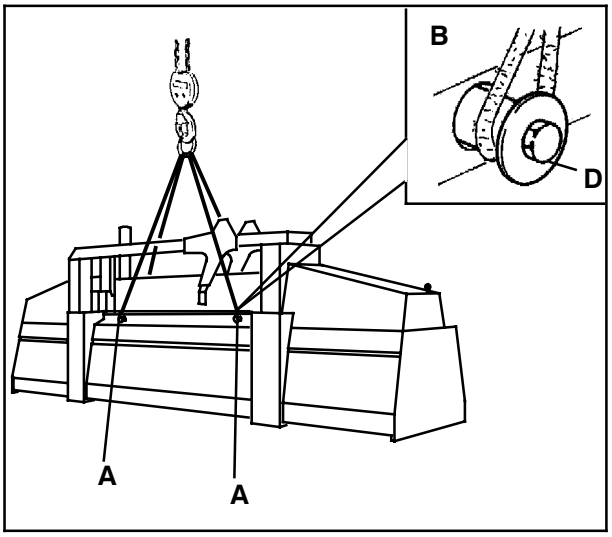
Refer to the weight of the machine and all auxiliary parts as specified in chapter 3.6. of the present manual.

5.3. MACHINE LIFTING AND TRANSPORT

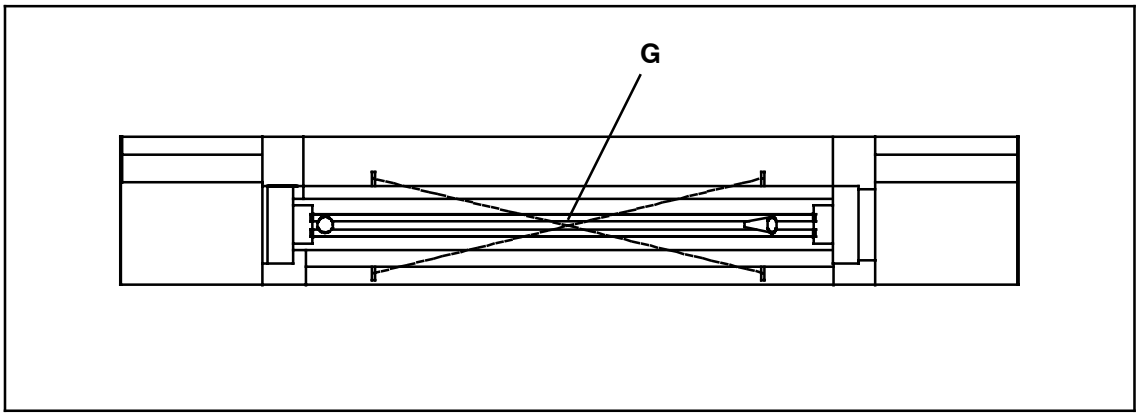
Specify the state of the machine at the moment of delivery.
Auxiliary components are packed separately in a wooden crate, and are protected by special material to prevent damage during transport. On the machine body, only the most exposed and delicate parts are protected, while the blade carriage is locked.
Bear in mind that the machine body and accessories have been treated with protective oils and grease, and therefore must be cleaned thoroughly before assembly.

MACHINE BODY LIFTING

To ensure completely safe lifting and handling procedures, proceed as follows:
– Locate the four holes (A) present on the base of the panel saw, sized to fit the bars supplied.
– Slacken bar safety stop (D), fit the bars in holes (A) and refit the stop.



– Hook the ropes to the crane, and position the latter in alignment with the centre of gravity (G) of the panel saw.
– Attach the other end of the ropes to the four bars.
– Lift the panel saw slowly, taking care to avoid swinging and that the ropes do not slip over the bar safety stop (B).
Store the bars in the safe place for future handling operations.



Wherever it is not possible to use an overhead travelling crane or other type of crane, the instructions below must be strictly observed :
When the machine leaves our workshops, it is in the following state:
the shearing machine is attached to the footboard with the wooden base boards, next to the machine feet (B)
To lift the shearing machine out of its container, use a fork–lift truck with long forks.
Proceed as follows :
a) Fit the forks into the space underneath the machine, making sure that the forks are long enough to include the machine foot (B) in the lift (see FIG.1)
b) Now, lift the machine slowly out of its container.

☞ It is essential to proceed exactly as described in point a); if the machine is moved without the foot (B) being completely supported by the forks the shearing machine could be seriously damaged (Fig.2)

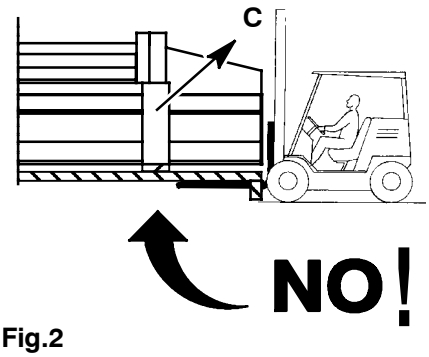


Fig.2

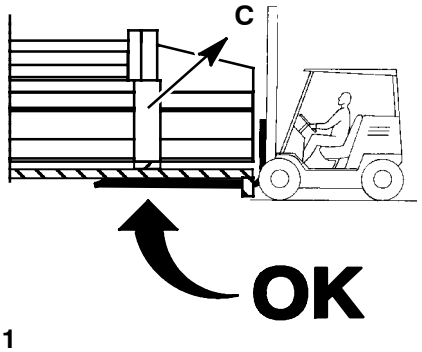


Fig.1

LIFTING AND HANDLING AUXILIARY PARTS

To lift auxiliary machine parts, proceed as follows:
– Sling individual packs with ropes;
– Hook the ropes to the crane, and position the latter in alignment with the centre of gravity of the part to be lifted;
– Lift slowly and avoid swinging.

N.B. Refer to the weights specified in chapter 3.6.

POSITIONING

☞ The saw must be installed on a level surface with maximum deviations of 30 mm.

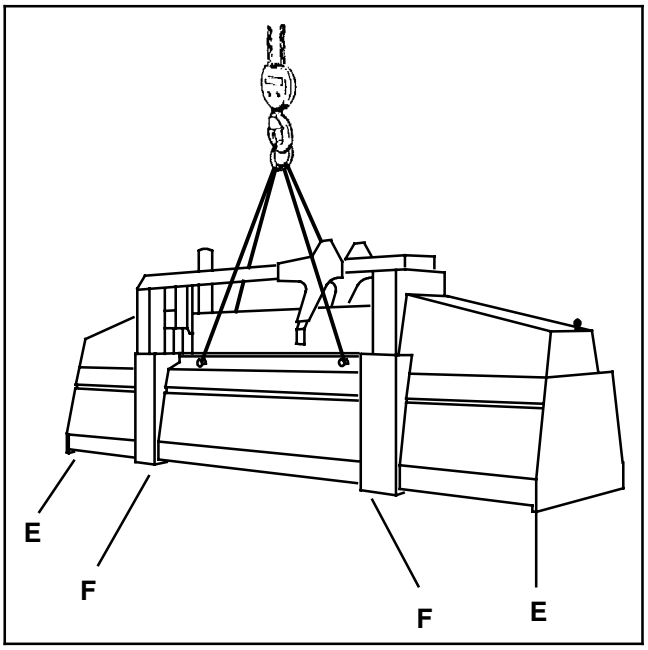
☞ The minimum load of the support surface must be greater than or equal to the weight of the panel saw.

When positioning the panel saw care must be taken not to knock the edges of the machine base.
Do not rest the machine on the ends A of the base.
Place two lengths of wood 1 cm thick under the base feet B and then rest the machine on these pieces of wood.
Next, raise the machine by a few centimetres, remove the pieces of wood and then position the machine as indicated in the paragraphs below.

TRANSPORT

If possible, it is very important that the machine centre (lifting point) corresponds to the centre of the truck, so that its stability is kept.
The machine is be anchored to the support plane of the truck, in order to avoid any movement in case of sharp braking or sudden changes of direction.
The anchoring is be carried out by fastening some wood bases to the support plane and among the different components as well.

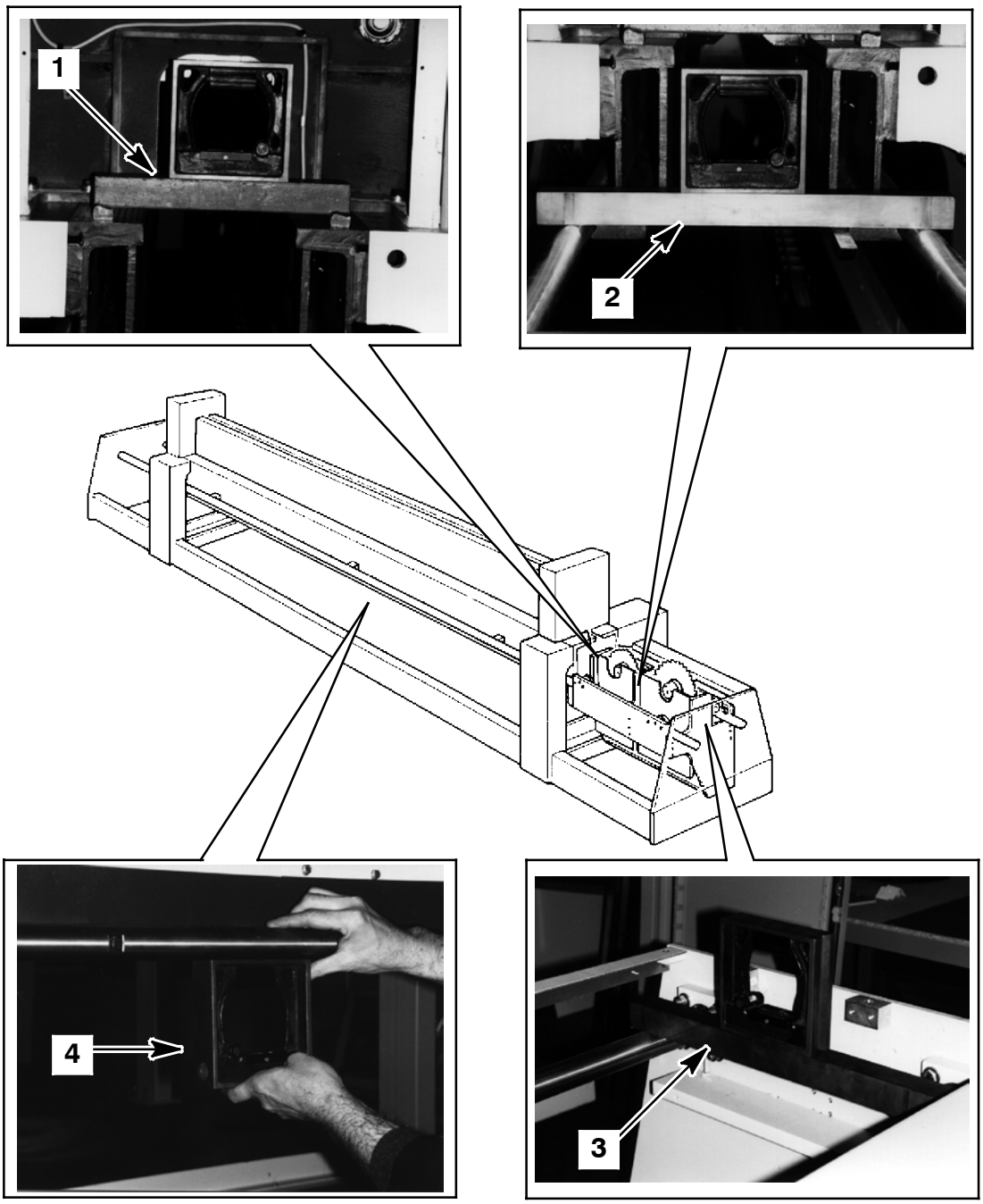
The machines have always to travel covered.



5.4. LEVELLING THE MACHINE

☞ **Assembly must be carried out exclusively by qualified personnel.**

Levelling is the first operation to be performed during installation.

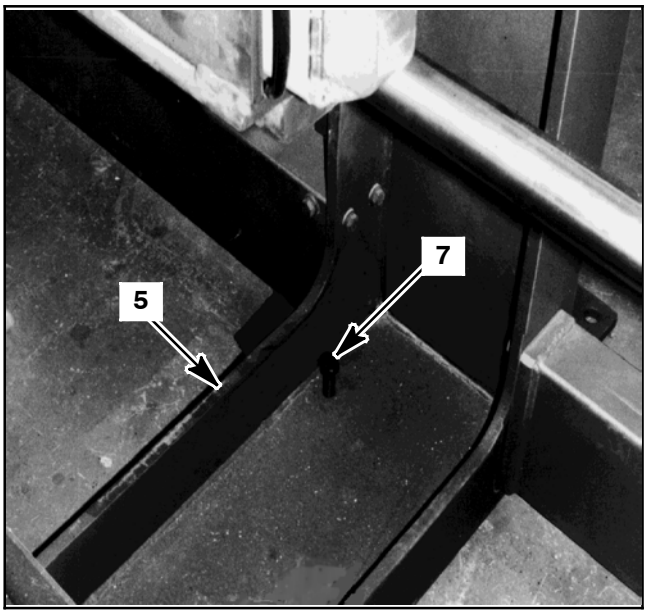


Cross levelling is performed using a perfectly octagonal metal rod and a spirit level in three different points in the blade carriage area (see figure), i.e.:
– on the internal baseplate of the pressure beam head (1),
– on the guides next to the pressure beam head area (2) (use metal rod and spirit level)
– at the end of the guides (3) (use metal rod and spirit level).
For longitudinal levelling, simply position the spirit level on the guides one at a time, approximately half way along the blade carriage run (4).

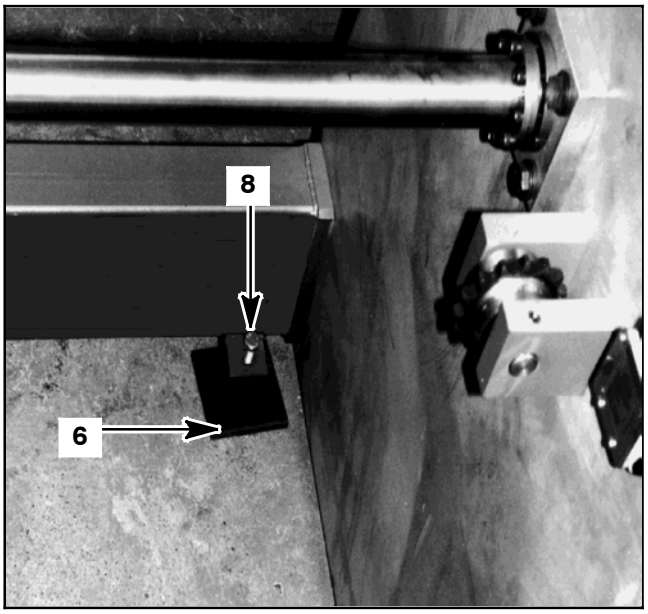
Having established the spirit level positions, proceed as follows.

Place the plates (5) under the feet and the plates (6) under the four outer supports of the panel saw. Lower the machine into position.

Use a spirit level (sensitivity 0.35mm/mt.) to level the machine lengthways and crossways. Turn the four adjuster screws (7) on the machine base to obtain the required adjustment. When the machine is level, screw down the four outer screws (8).



The plates (5) have holes for the expansion bolts used to fix the machine body to the floor. The machine must only be fixed to the floor when assembly, levelling and testing of all machine units has been completed.



N.B. The adjuster screws must not project from the plates by more than 20mm. If they project by more than this amount, increase the thickness of the steel plates.
The screws (8) must be screwed down so that they make contact with the plates (6) without affecting the level of the machine.

5.5. PRELIMINARY CLEANING

Before proceeding with installation operations, clean off the rust-proof coating used to protect the machine during despatch and transport.
Use petrol or benzene to clean the horizontal and vertical carriage guides. Clean all machined contact surfaces.

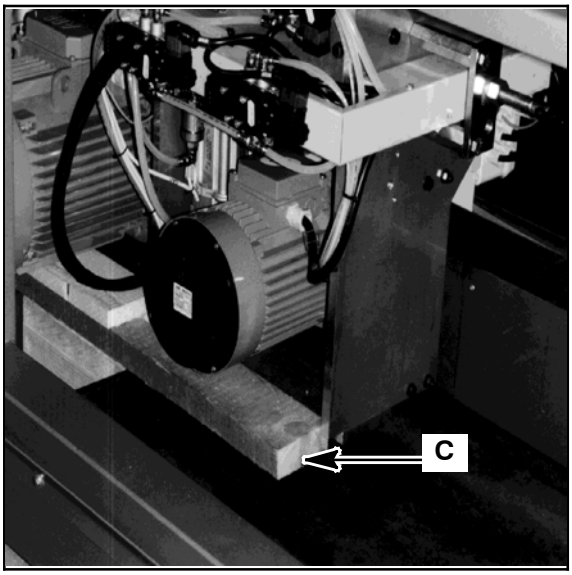
5.6. REMOVING THE CLAMPING BLOCKS

When the machine was packed ready for delivery at our works, a wooden block was placed under the blade motor to prevent movement of the saw carriage and to take the load off the saw carriage pulleys.

The block is fixed in position after the saw carriage raising solenoid valve has been de-energised. To prepare the machine for operation, proceed as follows:

1 – Raise the saw blade cover.

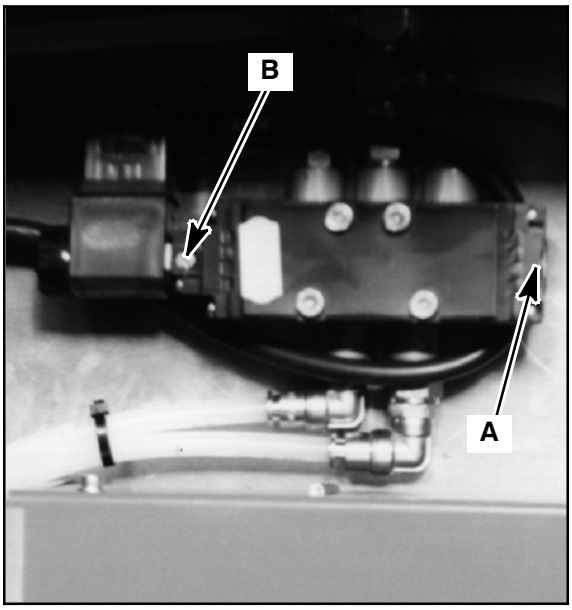
2 – Remove the side covers from the base feet.
3 – Fit the compressed air hose to the compressed air connector.
4 – Remove the wooden block C supporting the motor of the main saw blade.



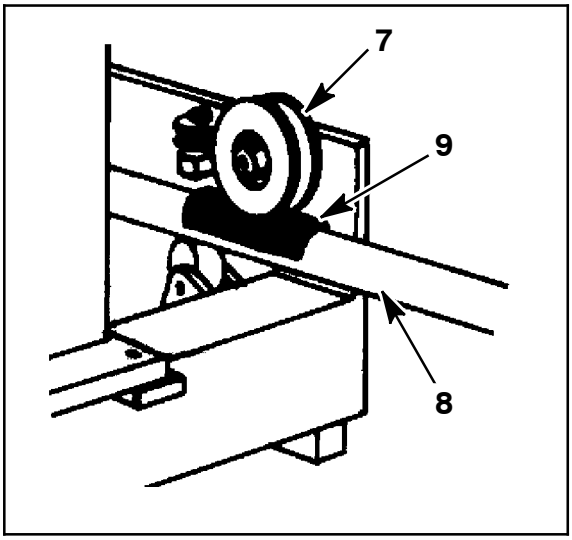
5 – De–energise the solenoid valve (A) of the blade hub release.

This exercise only needs to be carried out on machines with automatic saw blade adjustment.
For machines with manual saw adjustment point 5 is irrelevant as the safety electrovalve (A) that stops the blade is not fitted.

6 – De-energise the saw hub raising solenoid valve by turning the screw (B) anti–clockwise until it stops. At this point the blade hub is at the end of its downward stroke.

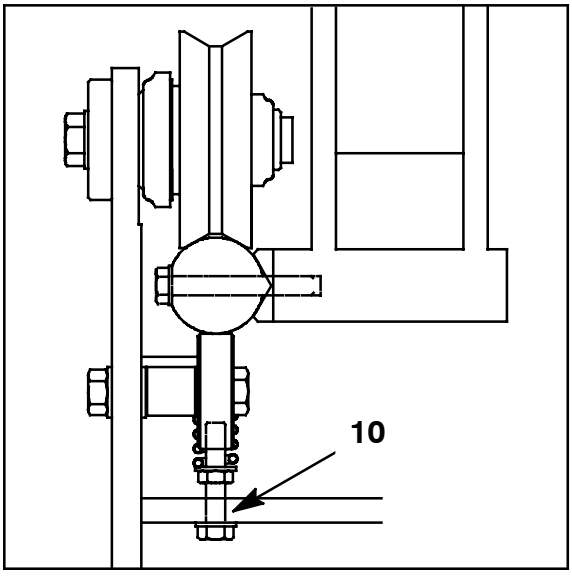


Immediately prior to delivery, a piece of black rubber (9) is installed between the guide wheel (7) and the guide (8) to prevent damage during transport.
Remember to remove the piece and to clean away any residue before operating the machine.
Remainder: ensure correct tensioning of the counter roller spring.



N.B. Before activating the blade carriage, adjust the tension of the pulley spring as follows: tighten screw (10) slightly, until it reaches the stop, then slacken through one turn.

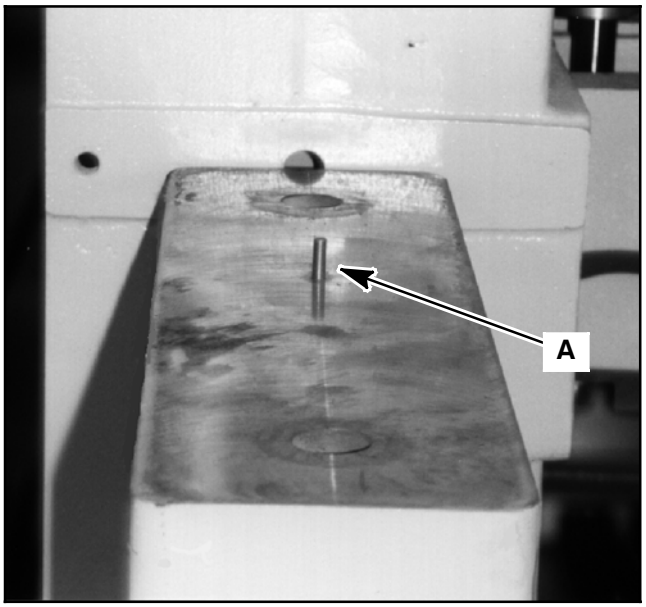
The panel saw is now ready for work.



6. INSTALLING THE MACHINE UNIT

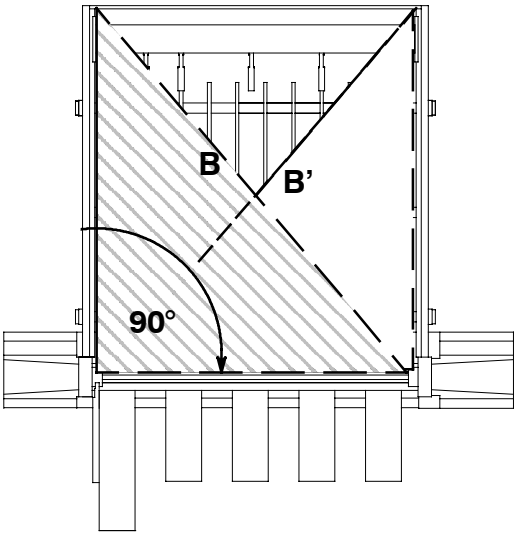
6.1. INSTALLING THE PUSHER UNIT

First, fix the support uprights to the pusher guides.
On the heads of the panel saw there are two supports. Each support has a fixed, calibrated reference pin for locating the guides.
Rest the left and right guides on their supports and then fix them to their respective heads. Ensure that the hole and the reference pin are correctly aligned.



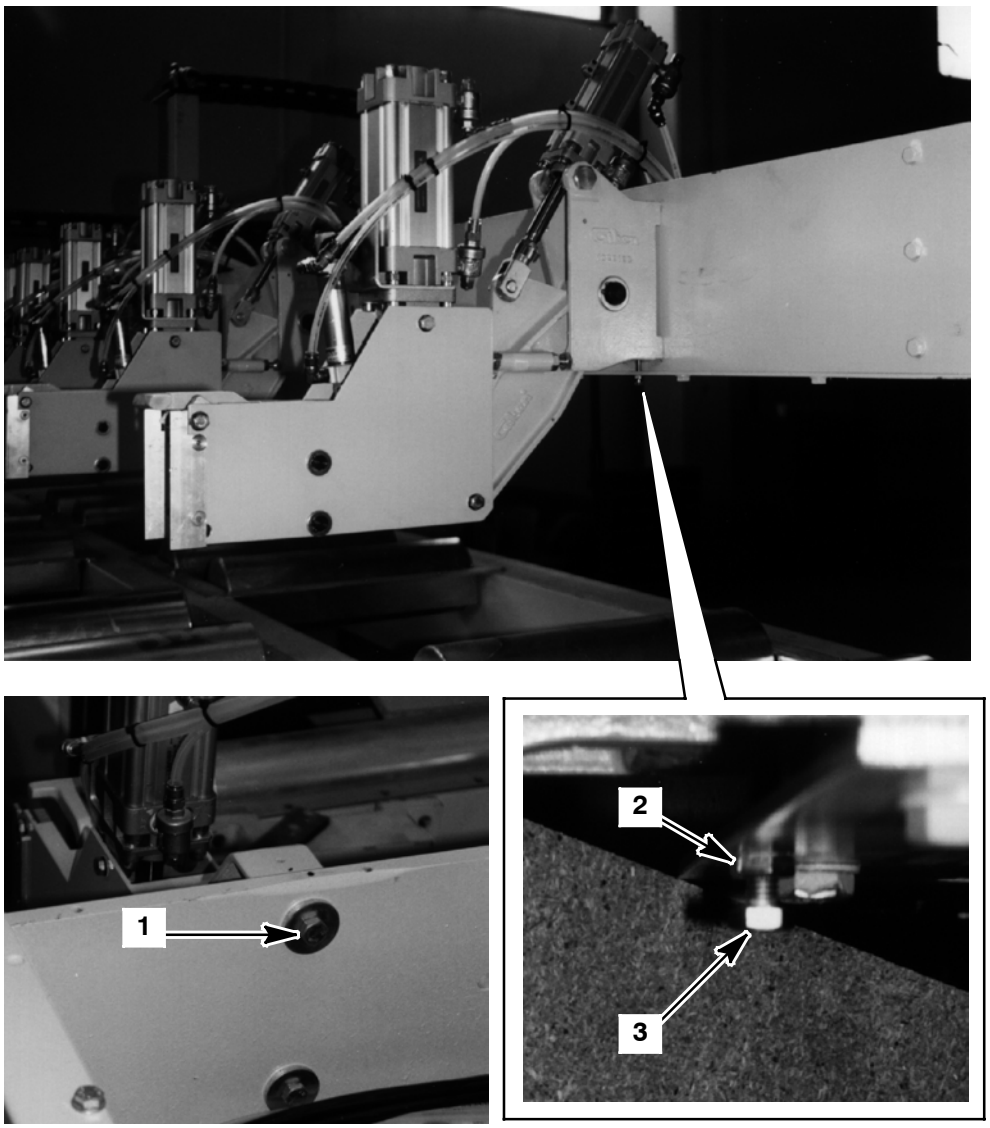
CHECKING THE SQUARENESS OF THE GUIDES WITH THE CUTTING LINE

Before starting, check that the guides are positioned correctly: place a spirit level on the work surface and ensure the correct vertical and horizontal alignment of the guides.
Before fixing the guide connecting beam, check that the measuring plug fits perfectly into the central and end zones of the guides. Check that the guide diagonals are equal (measure from the rack teeth).



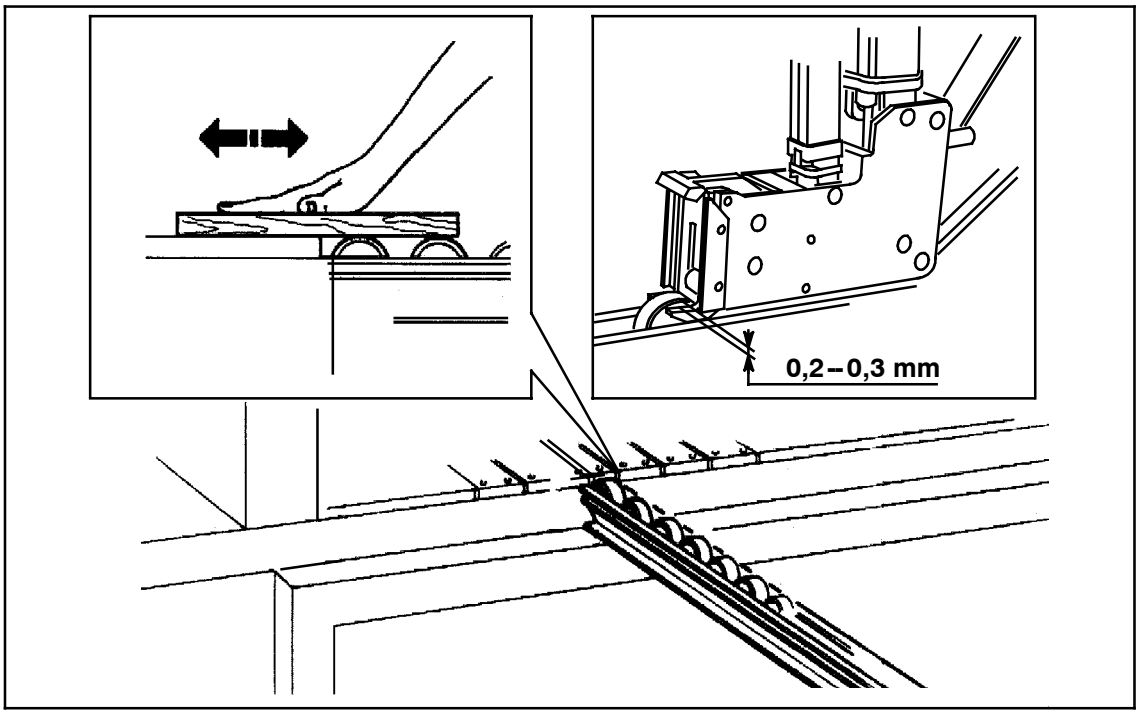
6.2. ADJUST THE HEIGHT OF THE GRIPPERS

If necessary, adjust the height of the grippers. To adjust the gripper height, loosen the the two bolts (1) holding the gripper to the pusher carriage. Loosen the nut (2) and screw or unscrew the bolt (3) to adjust the height of the gripper.

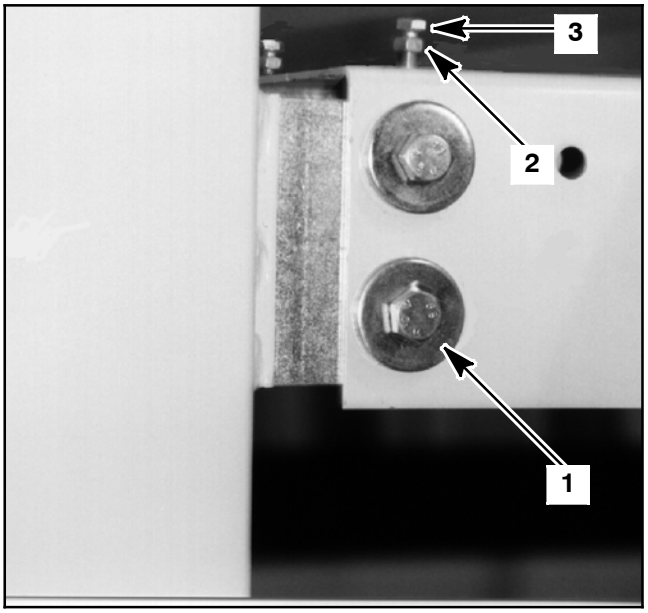


6.3. PANEL TRANSPORT ROLLERS

Fit the mobile table beams to their supports at the foot supports and tighten their retaining bolts. Fit the roller bar sections (or the polyzene sliding strips) to the ready–drilled holes in the beams. Check that the roller bar sections are level with the cutting table by resting a strip of wood across the rollers and the table (see the picture below); the strip of wood must rest uniformly on the rollers and the table.
Move the pusher to the rear fitting of the roller bars and check the rollers (or the sliding strips). The rollers (or the polizene strips) must project by 0.2–0.3 mm from the panel support surface of the gripper.



If necessary, adjust the height of the mobile table support beams by loosening the bolts (1) and the nuts (2) and then adjusting the bolts (3) by an equal amount. When you have made the necessary adjustments, retighten the bolts (1) and the nuts (2).



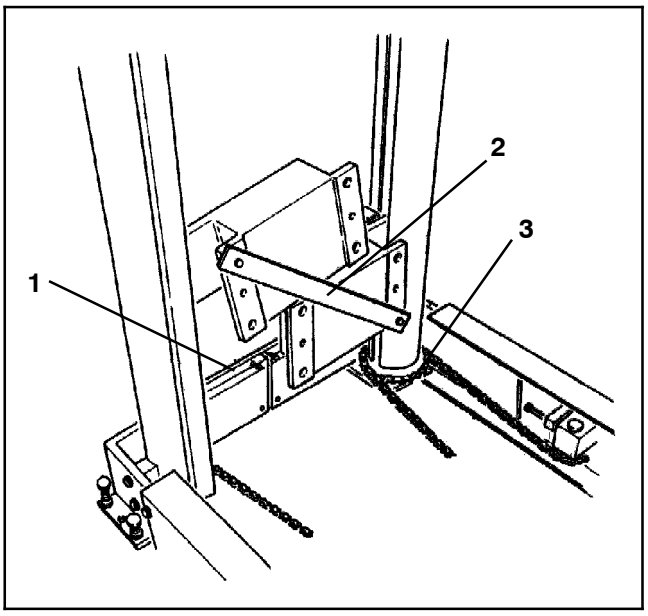
6.4. LIFTING TABLE (MODEL SPT)

Lifting tables which are 1600 mm wide are delivered ready–assembled. Lifting tables with a width of 2200 mm or more are delivered disassembled in order to facilitate transport.

Lifting tables 1600 mm wide must be positioned following the layout drawings supplied with the machine. Then join the brackets (that act as material stops on the mobile table), together.

Lifting tables wider than 2200 mm must be assembled as follows:

–Place the table on a flat floor.

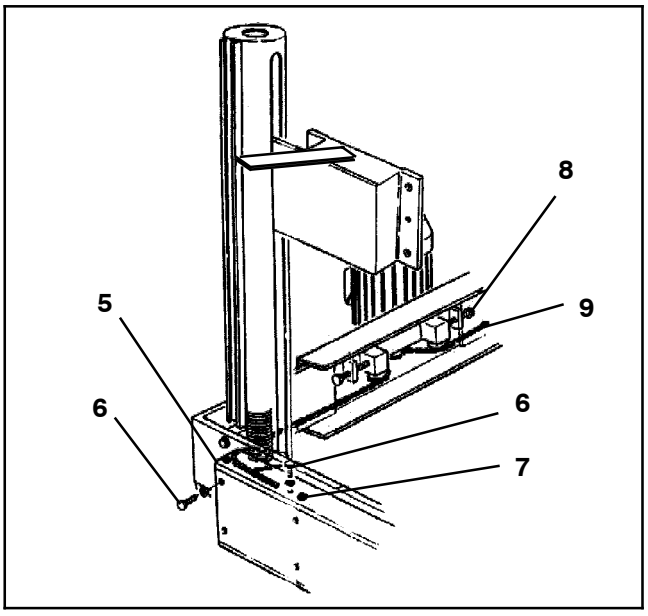


–Remove the transport plates (1 and 2) and remove the ropes holding the chain in place.

–Open the columns taking care that the chain does not come off the sprockets (3).

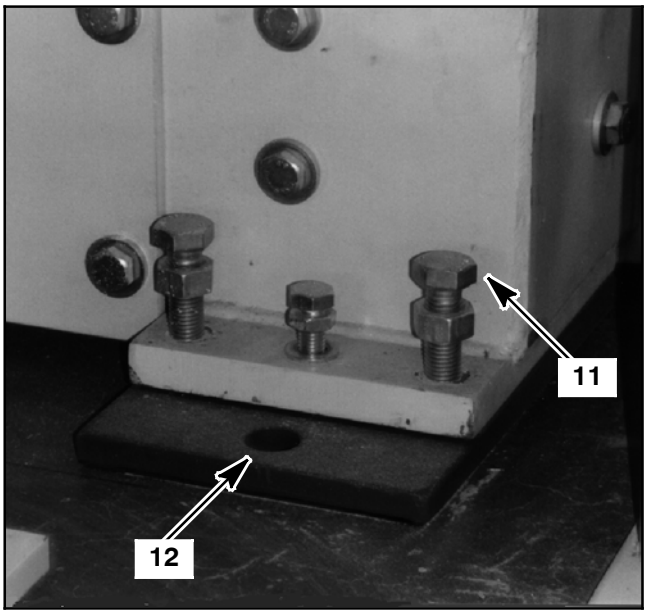
N.B. At our works the chain was clamped in position in phase with the sprockets in order to ensure uniform raising of the table. It is important therefore that the chain does not move on or leave the sprocket during assembly operations.

–Join the columns using the U–beams (5) and fix these in place using the bolts (6). The grub screws (7) have been adjusted during test assembly in our works to ensure that the U–beams will be in the correct position. Do not alter the adjustment of these grub screws (7).
–Adjust the chain (9) tension by turning the bolts (8). Adjust the chain step by step until you obtain the desired tension.
–Use a fork lift truck to lift the mobile frame of the table until it is level with the fixing brackets.
–Match up the reference pins between the bracket and the mobile frame, attach the frame on the four sides and tighten the bolts.
–Fix the material stop bracket to the fixed frame of the table.

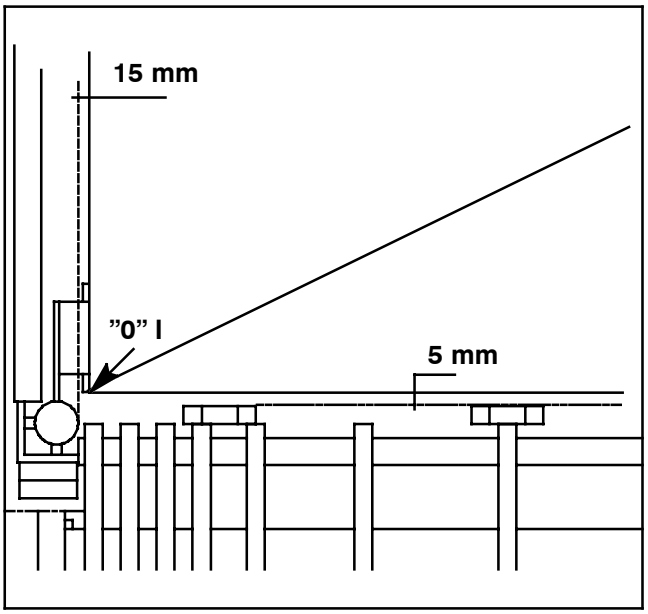


POSITIONING

The lift table can be positioned by placing screws (11) in the spot faced holes in plates (12).
In this way the front and sides of the lift table are correctly positioned.

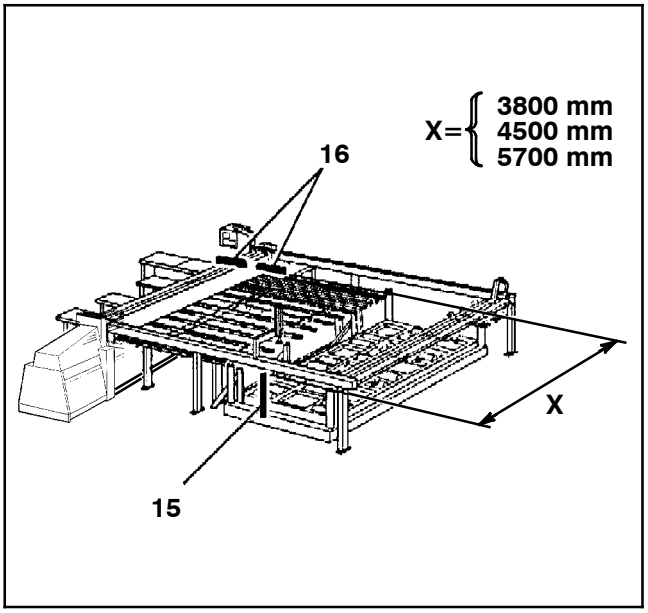


Mount the lift table taking into account that it must be positioned 5 mm from the stops on the bed and must protrude transversally by 15 mm with respect to point “0” .



Correct side positioning can be checked by fitting the side stop of material (13) and making sure that there is one cutting length from the squares (14).

The material stop must be fitted on the section with the electronic counting device, i.e. on the longitudinal zero point.



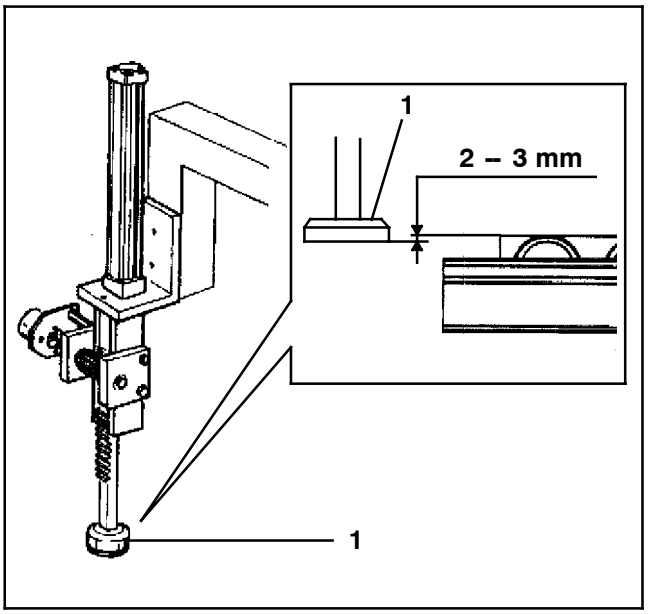
LEVELLING

Level the lifting table by turning the adjuster screws on the feet. When the lifting table is in the lower position there must be a distance of 720mm between the material contact surface of the rollers and the table surface.

6.5. ELECTRONIC COUNTER UNIT (MOD. SPT)

The counter unit is fitted by fixing the arm to the machine frame with bolts, using the tapped holes provided.

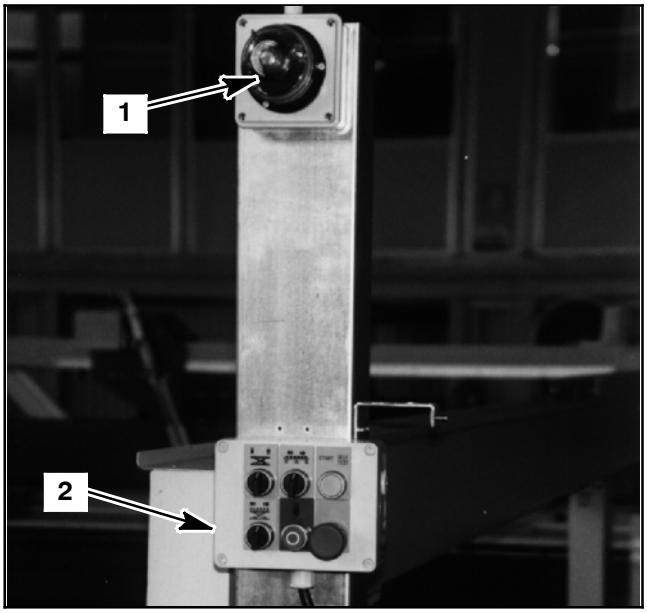
The electronic counter unit must be adjusted so that the detector (1) is 2–3 mm under the roller surface to prevent accidental marking of any panels that might not be perfectly level.



6.6. PHOTOELECTRIC BARRIERS

Photoelectric barriers are positioned at the rear and the side of the cutter load zone (fig.). These barriers ensure operator safety during loading operations by preventing contact with moving parts. In normal working conditions, if a photocell beam is broken, the cutter will shut down and set to emergency mode.

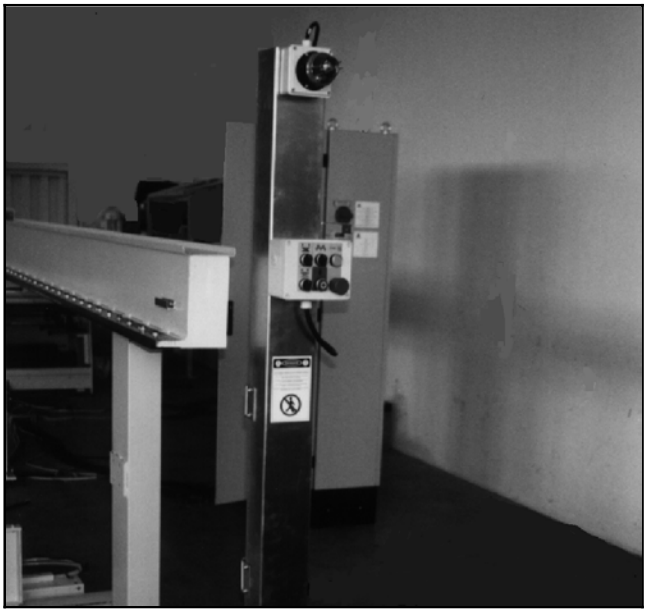
During loading operations, the operator enables stack entry by means of a control on the panel.
The push–button on the local board illuminates together with the flashing lamp (1). In these conditions, if the photoelectric ray is broken, the pusher and table will be stopped only, thereby allowing loads conforming to safety standard types.
Once the stack has been loaded and a check has been made that no–one is inside the protective nets, restore normal working conditions by pressing the reset button on the local board (2) and disable the load from the panel.



Assembly and maintenance
Make sure that the photocells are arranged as indicated by the machine lay–out.
The photocells have been positioned in compliance with recommendations given in standards governing the use of photoelectric barriers (Pr EN 999).
Bear in mind that machines with pre–load rollers supplied by the manufacturer will have twin–beam photoelectric barriers; in the case of rollers supplied by the customer, a third beam will be necessary.

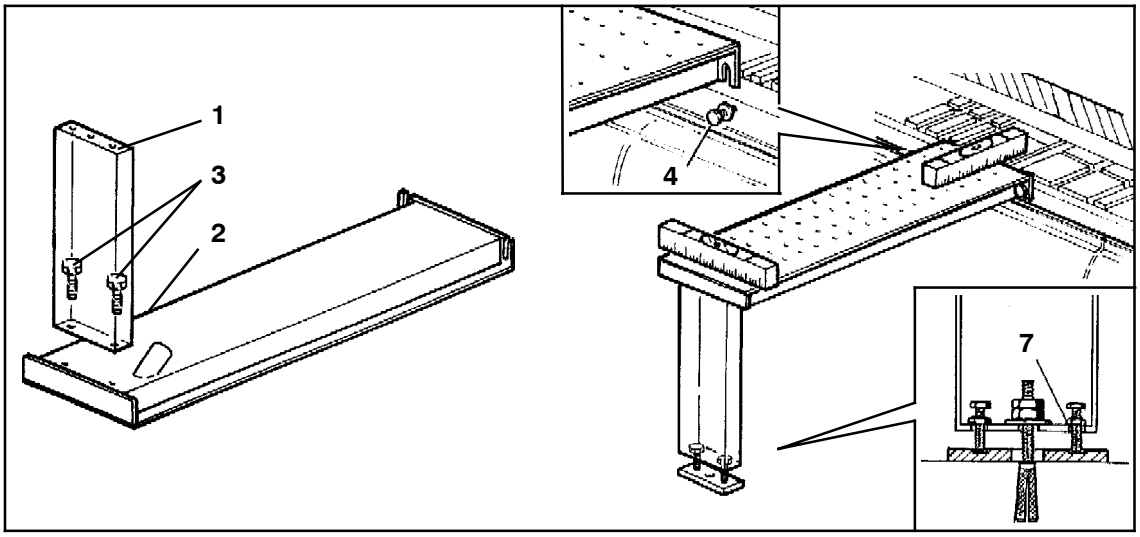
When assembling the photocell barriers, secure the upright supports perfectly vertical, then position the photocells in their respective slots; align the photocell beams precisely.
When aligning the beams, beam in mind that:–when the LIGHT is OFF: beam has been broken;
–with YELLOW LAMP: the beam is unbroken but signal is weak;
–with GREEN LAMP: beam is unbroken and signal is optimal.
Secure the photocell to the support when the optimal signal has been located.
Make sure that the beam remains active, and that the photocells are not subjected to movement or knocks which could alter them from correct alignment.

Damaged photocell barriers should be repaired immediately.
Call our service office, quoting the codes below as required:
004704401 – photocells;
AA05141 – photocell support;
004273101 – flashing lamp;
004704410 – power unit.



6.7. AIR CUSHION TABLES

To facilitate transport, the upright support (1) was detached from the air table section (2) before despatch. Before attaching the table to the panel saw therefore, join the two components together again with the bolts (3).
Ensure that the contact surfaces of the air cushion table and the crosswise panel saw are clean.
Slide the slots of the air cushion table over the bolts (4) already fitted to the machine base.
Place the foot plates (5) under the upright and turn the bolts (4) without tightening them.
Level the air cushion table using the bolts (6). Once the table is level, tighten the lock nuts (7) and the bolts (4).



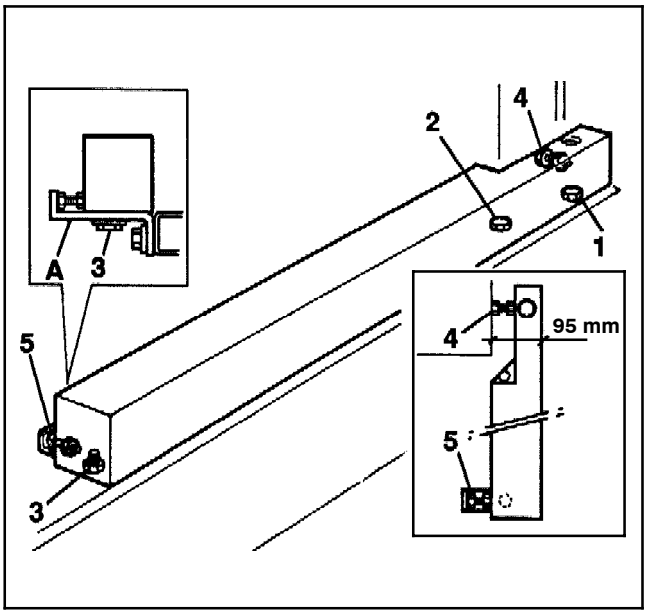
6.8. FENCES

FRONT FENCE

Fix the bracket A to the air cushion table. Rest the fence on the bracket A and on the machine base.

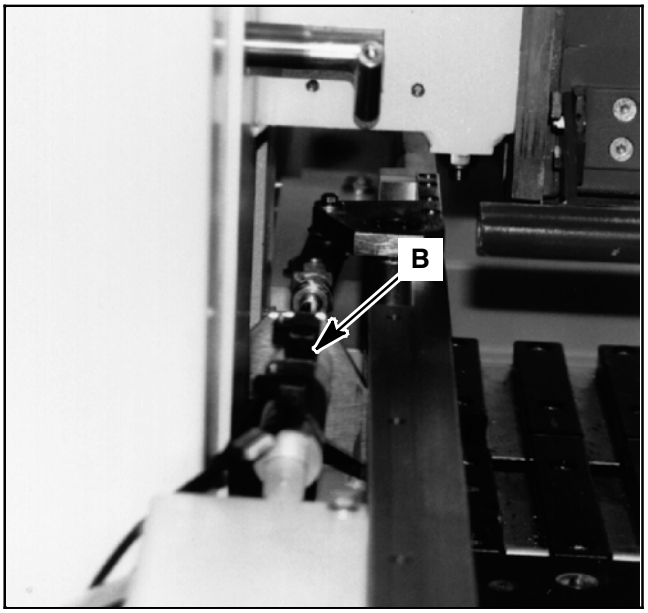
Fit the bolts 1, 2 and 3 but do not tighten. Screw up the adjuster 4 and 5 so that the machined surfaces of the fence and of the head are approximately 85 mm apart.

Check the squareness of the fence with the cutting line and adjust if necessary using the adjuster bolts 4 and 5. Tighten the bolts 1, 2 and 3.



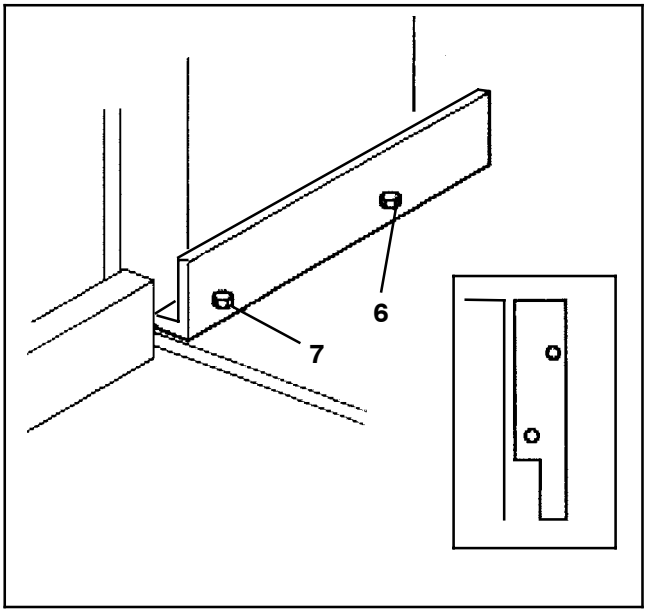
FRONT FENCE
(for machines with Post Forming on beam head)

Assembly and maintenance are as specified above.
The mobile section of the fence is activated by a solenoid valve (B) which must be checked periodically to ensure correct operation.
NB. During assembly, ensure that the recess on the fence is aligned with the centre of the cutting line.



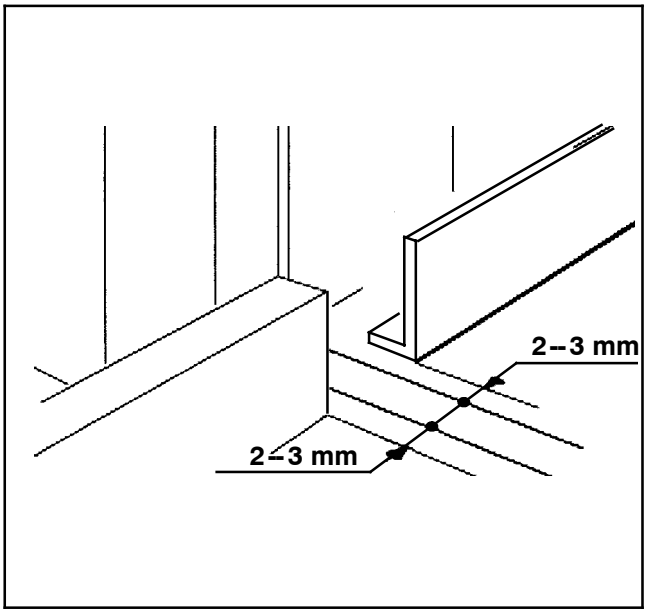
REAR FENCE

Fit the fence on the machine base but do not lighten the bolts (6 and 7). Rest one end of a strip of wood against the front fence and move the rear fence so that it makes contact with the other end.
Use the adjuster bolts (8 and 9) to adjust squareness. Once adjustment is complete, lighten the bolts (6 and 7).



CAUTION!

The fence ends must be 2 – 3 mm away from the cutting channel so that they cannot come into contact with the saw blade.



6.9. FIXING THE PANEL SAW TO THE FOOR

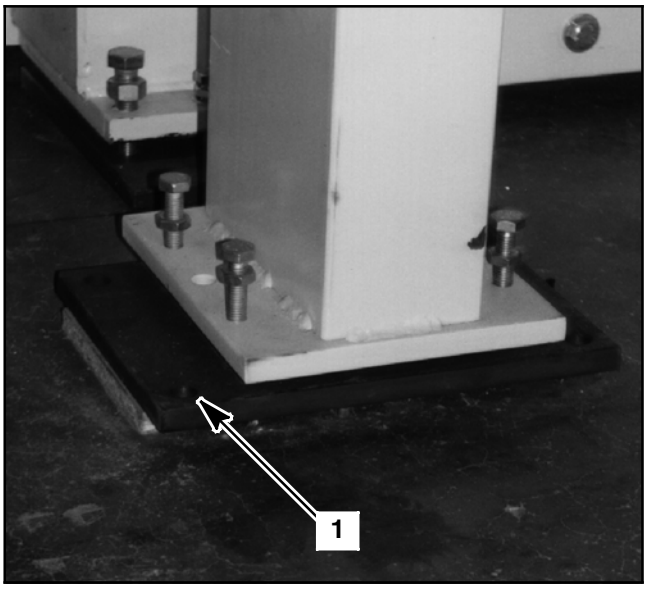
☞ **Ensure correct anchoring of the machine to ensure minimal vibrations.**

☞ **The above must only be carried out after ensuring correct assembly, levelling and operation of all machine parts.**

The holes for the xpanding plugs have to be made in a hard floor. If it is not hard, to create suitable conditions, make make pits on supporting corners, and fill them by pouring cement.

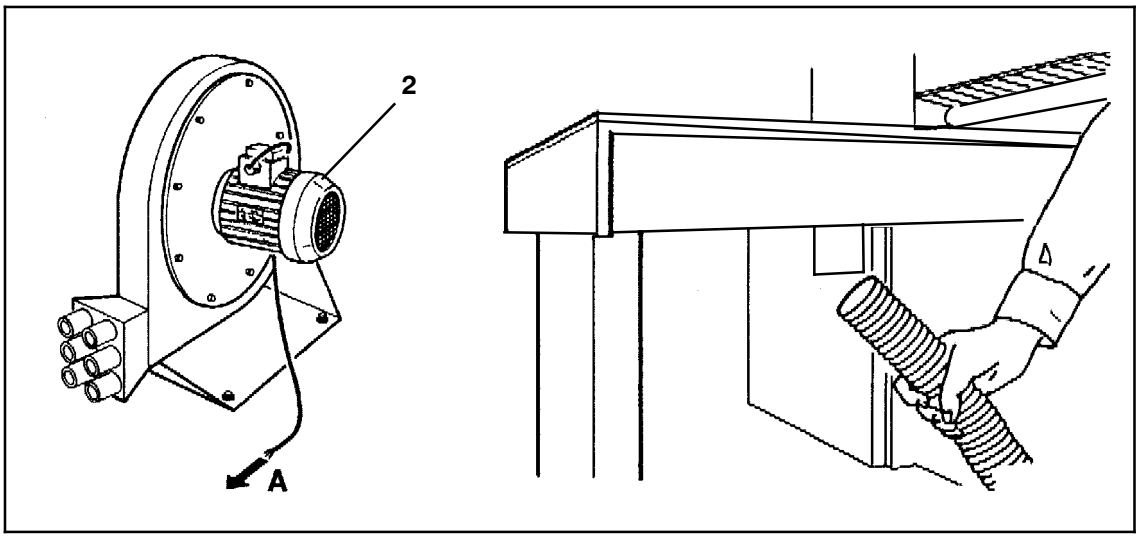
Drill the holes on the floor to a depth of 90 mm, in alignment with the holes in plate (1).
Remove all residue from the holes and insert the expansion bolts until they come into contact with the plate (if necessary, tap lightly with a hammer to fit correctly).
Fix the machine parts in the following order:
– panel saw support feet
– guide support feet
– table feet
– air cushion surfaces

N.B. These floor fixing instructions are given as a guide only. Floor fixing of the machine is the client's responsibility.



6.10. CONNECTING-UP THE AIR GENERATOR

Mount the air generators at the back of the panel saw (under the panel transport rollers) to keep the work area free. Pass the flexible hose under the panel saw area. Wire the generator cable (1) to the main electrical control panel. The control switch for the generators is on the electrical control panel.
Once the generators have been connected up, check that the fan is rotating in the direction of the arrow on the motor plate. If it is turning in the wrong direction, invert the connections.
Connect the air generator to the air cushion table by attaching the flexible hose provided to the inlet under the table.



7. CONNECTING–UP

7.1. ELECTRICAL EQUIPMENT

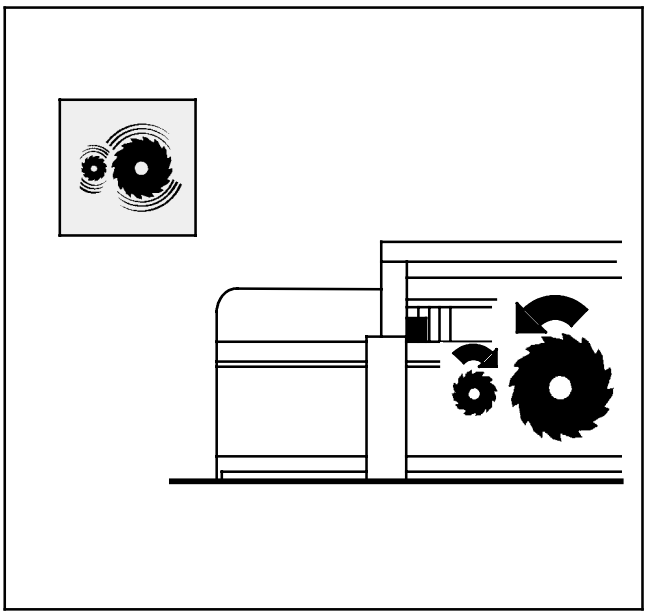
Before connecting your machine to the main power supply, ensure that your works mains voltage is the same as that indicated on the plate rivetted to the electrical control panel.

The cross section of cable to be used for connecting-up to your mains power supply depends on the installated power and voltage of your machine and the length of the cable being used.

Bear in mind that the electric cabinet is not equipped with an electric door interlock (for maintenance reasons). Cabinet doors may only be opened with a special key to be kept exclusively in the possession of the machine operator.

To connect–up, proceed as follows
Pass the power supply cable through the cableway on the bottom of the electrical cabinet.
Connect the three terminals of the power supply cable to the terminals on the main switch.
Connect the yellow–green wire to the earth terminal. This is the earth connection for the entire machine and must be connected up with the greatest care.

Press the blade start pushbutton briefly several times to check that the blade rotates in the cutting direction, i.e. anti–clockwise.
e If the main blade does not rotate anti–clockwise with respect to the operator positioned in front of the machine, invert two of the phases.
N.B. The scorer blade must rotate in the opposite direction with respect to the main blade (clockwise).



7.2. PUSHER

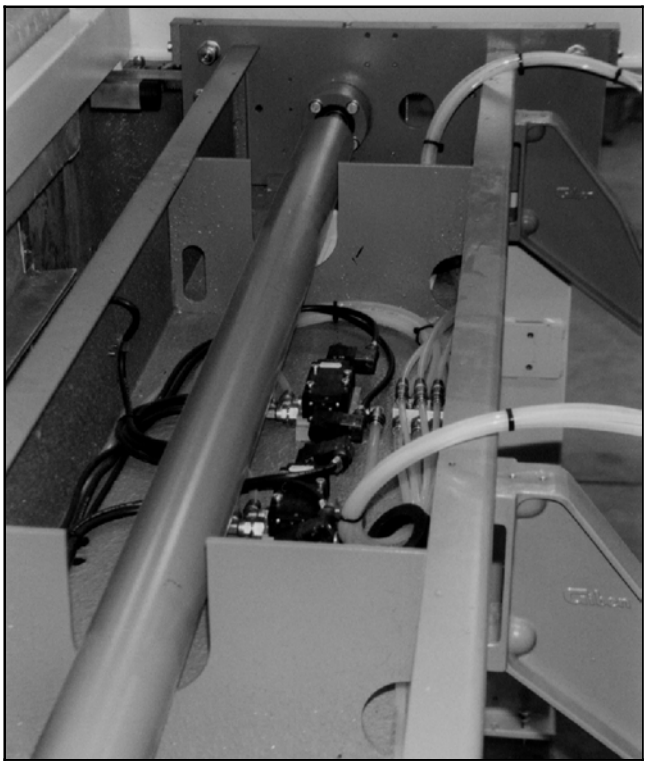
Pusher unit has been pre–wired to simplify its connection to the electrical control panel. Just connect pusher unit cables to the terminal board.

Proceed as follows

Take the motor cables and those leaving the junction box and lead them along the pusher guide to the electrical cabinet; use the pusher guide cover to keep the power supply cables separate from the signal cables.

Pass the cables along the cableway and into the electrical cabinet following the numbers.

Connect up the cable wires to their numbered terminals.



7.3. LIFTING TABLE (MOD.SPT)

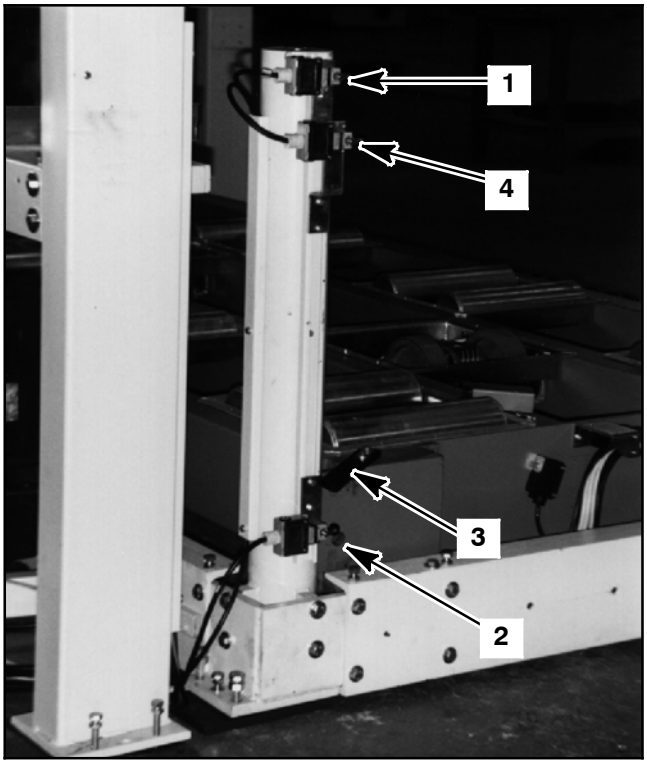
Connect the wires from the electrical control panel to the terminal board inside the junction box of the lifting table motor; follow the wire numbering.

Fit the microswitches (1 and 2) and adjust as follows:

The cam (3) must trigger the LOWER position stop microswitch (2) when the rollers of the lifting table are level with the preloading rollers (where fitted).

The cam (3) must trigger the UPPER position stop microswithc (1) when the rollers of the lifting table are level with the preloading rollers (where fitted).

The microswitch (4) is used for stopping the table when thin material is being packed up. This microswitch must therefore be triggered at 30 mm below the level of the lengthways sliding surfaces.



7.4. COMPRESSED AIR CONNECTION

The compressed air connection points are indicated on the machine layout drawing by the letter “D”, which correspond to the connection points for the “Filter Regulator Lubricator” (FRL) units.

SAFETY PRECAUTIONS

☞ **Check that nobody is standing near the machine or within the mesh guards before opening the compressed air circuit.**

☞ **Always wear goggles to ensure protection against unexpected blasts of air.**

☞ **Check the compressed air system for leaks.**

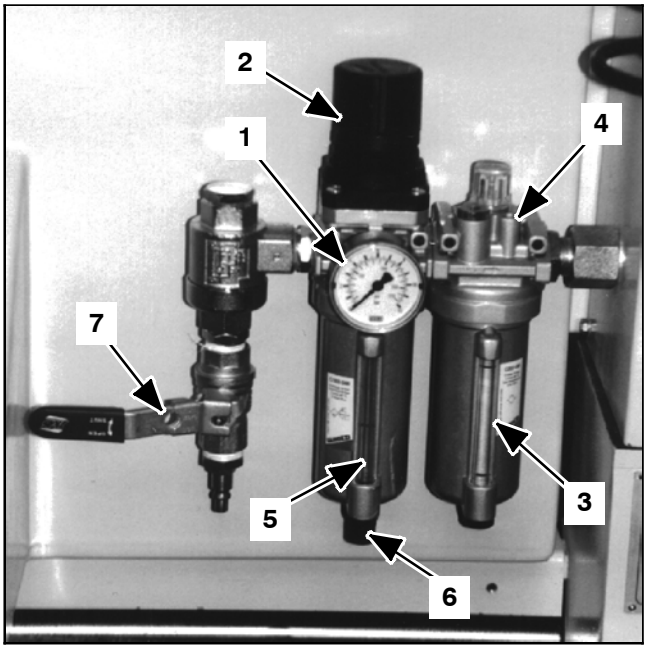
☞ **Before carrying out any adjustments or cleaning operations:**
1 **Turn off the compressed air circuit isolating switch**
2 **Immobilize the isolating switch (7) using the padlock provided.**
3 **Remove the key from the lock and retain.**
4 **Exhaust the compressed air from the circuit.**

☞ **In the event of a general drop in pressure, unload the machine using the device (6).**

CONNECTION

Connection to the compressed air system must be made using a rubber hose, which is attached to the FRL unit by way of a ½” BSP fitting.

Connection to the compressed air system must be carried out following the procedure described below:
– Check that the padlockable isolating switch is closed.
– Push the rubber hose over the fitting.
– Secure the hose to the fitting with a metal clip.
– Open the on/off valve of the compressed air supply system.
– Open the lockable isolating switch upstream of the FRL unit.



Check that connection has been made properly by reading the pressure indicated on the gauge (1), which should indicate between 5 and 6 bar (operating pressure of the panel saw), if not, adjust the pressure regulating valve (2).

Check that the oil level in the lubricator cup never drops below the mark (3). When topping up, use only the recommended type of oil indicated in the lubrication chart.

Check that the lubricator is operating correctly: oil should be delivered at a rate of one drop every two cycles. The frequency can be adjusted by turning the screw (4).

Periodically, drain off the condensate that forms inside the filter (5) by turning the drain screw (6).

N.B. It is extremely important that the filter should not be allowed to fill with water. Check the condensate frequently.
The rubber hose, padlock and hose clip are not supplied by Giben.

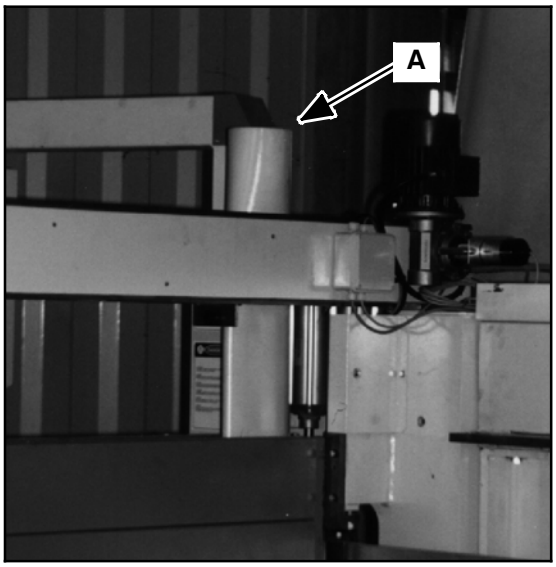
7.5. DUST EXTRACTION EQUIPMENT

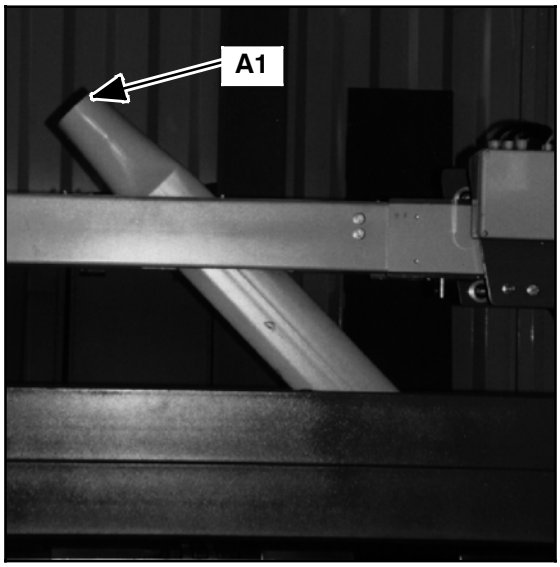
DO NOT USE THE PANEL SAW WITHOUT FIRST TURNING ON THE DUST EXTRACTION EQUIPMENT. A BUILD–UP OF DUST CAN CAUSE SERIOUS DAMAGE TO THE MACHINE

☞ **Do not under any circumstances use the machine without first switching on the suction system, as the continuous presence of dust around the machine may cause serious injury to the persons working on it and prevent it from functioning correctly.**

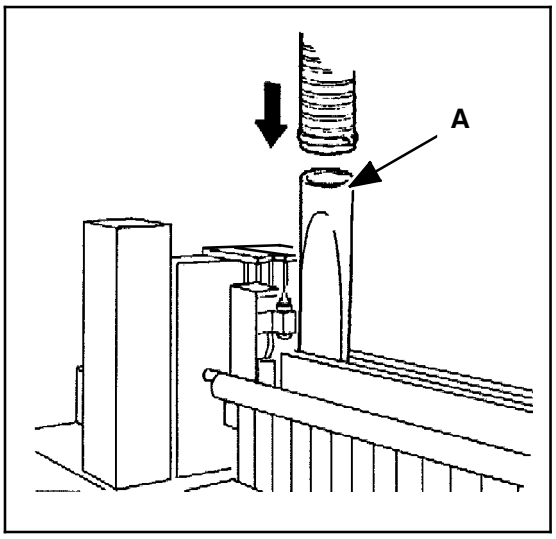
The machine is supplied with two dust extraction ducts.

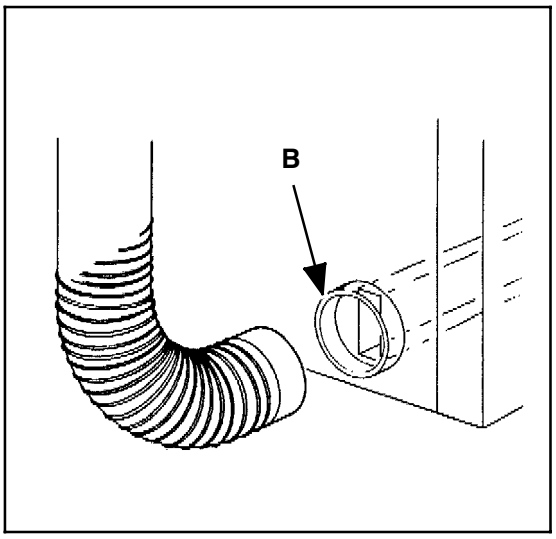
The first is situated on the pressure beam, and may be equipped with one or two 115 mm diam. intakes (A) (A1), according to the cutting capacity of the machine.





The second is situated alongside the cutting line inside the panel saw (B), and has an intake diameter of 200 mm.





Connect a flexible pipe to the air intakes. Avoid excessive bending of the pipes, which could hamper suction of particles.
The application of a filter is also recommended.
Always turn the suction system on before starting up the panel saw.

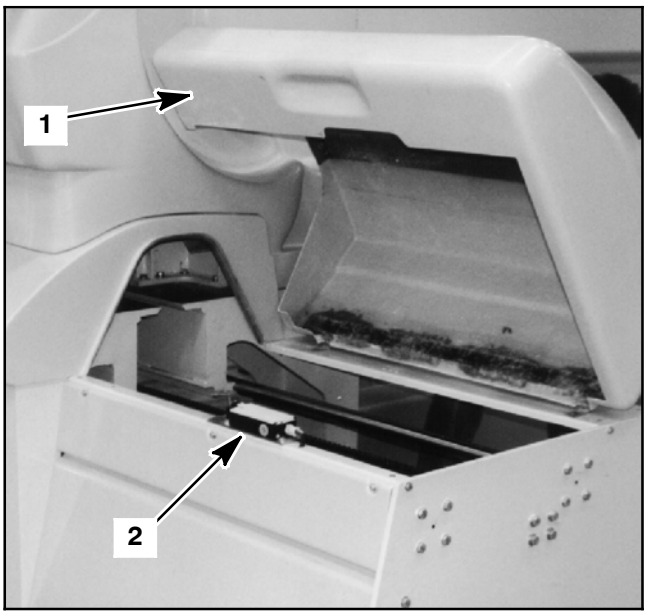
8. SAFETY DEVICE

8.1. CHECKING THE OPERATION OF SAFETY DEVICE

The machine is tested prior to delivery, and therefore all safety devices should be fully operative; check that no damage has occurred during transport.

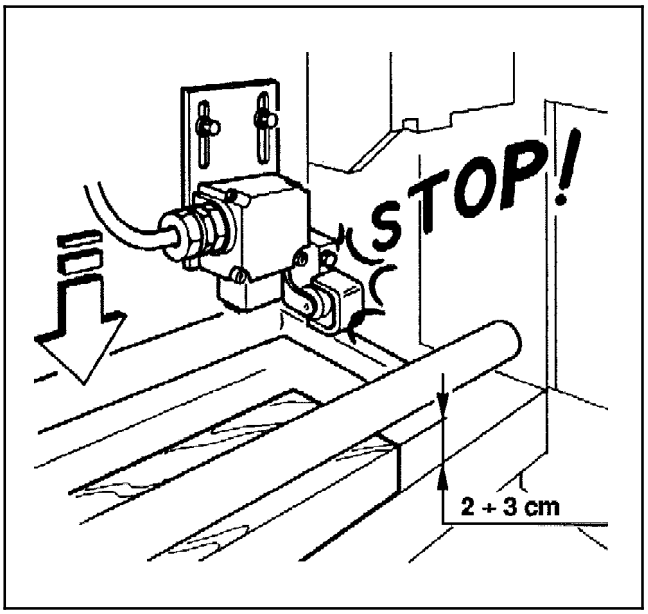
Blade zone guard

The blade operation area is protected by a guard (1) ; to lift, proceed as follows :
–set the machine in safety mode by the emergency mushroom head pushbutton;
–the green blade START pushbutton starts flashing until microswitch (2) is released to enable guard opening;
–the blade guard can now be opened.

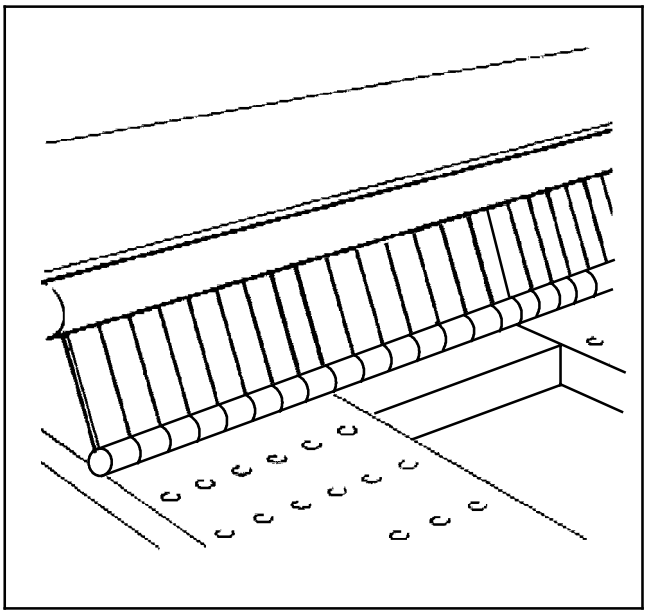


☞ To open the guard in the event of a power failure, disassemble the laeral guards and use a suitable tool to release the microswitch.

Safety bar
The safety bar is atached to the pressure beam and will operate if it encounters any object it operates a micro–switch thus triggering a saw emergency condition, whereby the saw is stopped and the pressure beam is raised.
Checking safety bar operation :
Insert an object 2–3 cm in height between the work table and the safety bar.
Start the cutting cycle.
As soon as the safety bar comes into contact with the object, a panel saw emergency should be triggered ond the pressure beam shoul be raised.



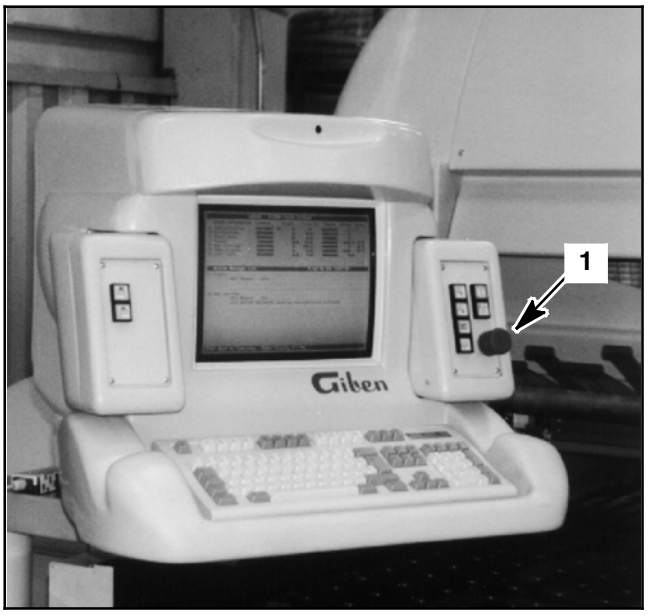
Guard Flaps



These are attached to a tubular section extending the entire length of the rntire length of the pressure beam.
The rotation of this tube is syncronized do the upward and donward movements of the pressur beam and prevents any access to the work table before the rotating saw blades are raised.
Tis means that the guard flaps will not allow any opening along the cutting length, thus making it impossible for anything (such as hands or objects) to get under the pressure beam.
As the pneumatic equipment of this safety devices is connected to that of the pressure beam.
As the pneumatic equipment of this safety device is connected to that of the pressure beam, check that the action of these components is correctly syncronised.

Emergency stop mushroom – head button
Simulate a cutting cycle and then press the emergency stop. The following sequence of events must occur:
– The saw blade carriage will stop in its current position.
– The blades will be lowered beneath the work table and stop rotating.
– The pressure beam will be raised.

To return to normal working conditions , reset the emergency stop button by turing to the rigth.

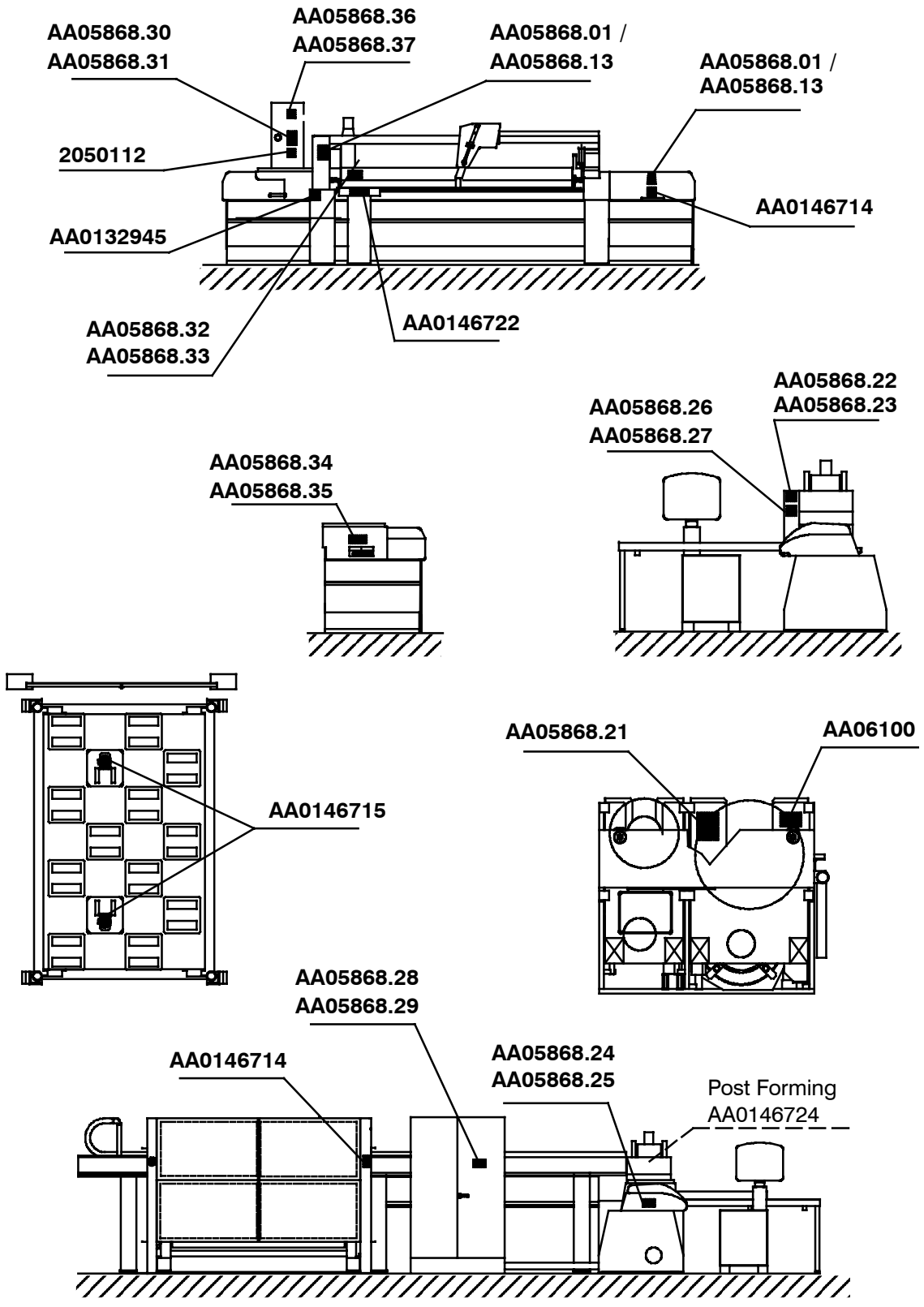


☞ **Before starting up the machine, fit the protectio barriers.**

☞ **Never remove fixed guards during machine operation.**

8.2. LABELS LAY-OUT

The lay–out shows the positions and codes of the labels that may be on this model of the machine (See Chapter 8.3. for identification of labels).



8.3. WARNING LABELS UNIT

All safety devices, including the hazard notices, must be kept in perfect condition. Replace any missing or damage safety devices immediatly and notify the Giben service centre of the new code (all notices bear individual codes located at the bottom left of the label).

IMPORTANT SAFETY PROCEDURES AND CONSIDERATION
REED AND UNDERSTAND CLEARLY.

1. Use of the Giben saw by persons who have not been thoroughly trained is hazardous. Do not attempt to operate this machine until you have read and understood the instruction manual and have been checked out by a qualified supervisor.

2. Never put your hand under the saw beam. Do not manually remove trim material or off cuts from anywhere near the cutting line.

3. There are no circumstances which justify operation of the Giben saw with safety guards removed, side panel removed or safety switches by–passed.

4. Failure to observe correct operating procedures during the operation of this machine can result in severe injury.

5. Keep the area around the saw clean to avoid tripping on pices of cut off material. Sawdust may cause the floor to become slippery.

6. Before changing saw blades, install a padlock on the main power switch so that the saw cannot be started. This rule also applies when maintenance is performed.

7. Always wear O.S.H.A. eye protection when operating the saw.

8. Do not make adjustments to, or clean the machine while it is running.

9. Remove loose articles of clothing such as neckties, etc.

10. Remove jewelry, such as finger rings, watches, bracelets, etc.

11. Good judgement, a safety conscious attitude and alertness are important operator qualifications. Do not attempt to operate the saw while under the influence of anything that reduces your alertness.

12. When changing saw blades use caution to avoid contact with the sharp saw teeth. We recommend the use of heavy gloves to protect the hands in case you slip while applying pressure to tighten or loosen blades.

13. Do not climb or sit on the machine.

14. This machine has been assembled and thoroughly tested at the factory.

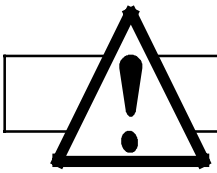
15. Most accidents, breakages and faults are due to carelessness during the start of the machine after setting up.

16. Before starting the machine check to see that no foreign objects have been left in or on the machine.

17. Do not cut materials which can cause sparks, they would flow into the dust extraction channels with serious fire risks.

18. All safety equipment including warning labels, must be maintained in original condition

COD. AA05868.05



ALTA TENSIONE
PERICOLO DI SCOSSA ELETTRICA O BRUCIATURE! TOGLIERE L'ALIMENTAZIONE GENERALE PRIMA DI LAVORARE ALL'INTERNO.

HIGH VOLTAGE
HAZARD OF ELECTRICAL SHOCK OR BURN! TURN POWER SUPPLYING OFF BEFORE WORKING INSIDE THIS EQUIPMENT FOLLOWING THE PROPER LOCK OUT PROCEDURE.

HAUTE TENSION
DANGER D'ELECTROCUTION OU DE BRULURE! COUPER L'ALIMENTATION GENERALE AVANT DE TRAVAILLER À L'INTERIEUR.

HOOGSPANNING
GEVAAR! : KANS OP ELEKTRISCHE SCHOK OF BRANDWONDEN! SCHAKEL DE HOOFDSTROOMTOEVOER UIT ALVORENS WERKZAAMHEDEN AAN DE BINNENKANT TE VERRICHTEN.

HOCH SPANNUNG
GEFAHR VON ELEKTRISCHEM SCHLAG UND BRANDWUNDE! SCHALTEN SIE DIE HAUPTSPEISUNG, BEVOR SIE IM INNEREN ARBEITEN.

ALTA TENSION
PELIGRO DE DESCARGA ELECTRICA O QUEMADURAS! QUITAR LA CORRIENTE GENERAL ANTES DE TRABAJAR EN EL INTERIOR.

HOOGSPANNING
GEVAAR VOOR ELEKTRISCHE SCHOK OF VERBRANDING! KOPPEL DE STROOMTOEVOER AF ALVORENS IN HET BINNENSTE VAN DE MACHINE TE WERKEN.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.30

ATTENZIONE
NON METTERE MAI LE MANI ALL' INTERNO DELL'APERTURA PERICOLO DI SCHIACCIAMENTO!

WARNING
DO NOT PLACE HANDS INSIDE THE OPENING POSSIBILTY OF INJURY EXISTS!

ATTENTION
NE PAS PLACER LES MAINS DANS L'OVERTURE. DANGER D'ECRASEMENT!

LET OP!
STEEK UW HANDEN NIET IN DE OPENING OM ONGELUKKEN TE VOORKOMEN!!

ACHTUNG
FÜHREN SIE NICHT DIE HÄNDE IN DIE ÖFFNUNG EIN: ZERQUETSCHUNGSGEFAHR!

ATENCIÓN
NO METER LOS MANOS EN EL INTERIOR DE LA ABERTURA PELIGRO DE APLASTAMIENTO!

LET OP!
KOM NOOIT MET UW HANDEN IN DE OPENING; GEVAAR VOOR VERBRIJZELING!

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.34

ATTENZIONE
NON METTERE MAI LE MANI SOTTO AL PRESSORE.

WARNING
NEVER PUT YOUR HANDS UNDER THE SAW BEAM.

ATTENTION
NE JAMAIS METTRE LES MAINS SOUS LE PRESSEUR.

LET OP!
HOUD UW HANDEN NOOIT ONDER DE AANDRUKBALK.

ACHTUNG
HÅNDE NIEMALS UNTERHALB DES DRUCKBALKENS.

ATENCIÓN
NO METER NUNCA LAS MANOS DEBAJO DEL PRENSOR.

LET OP!
KOM NOOIT MET UW HANDEN ONDER DE AANDRUKBALK.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.32

ATTENZIONE
NON FARE FUNZIONARE LA MACCHINA QUANDO LA PORTA É APERTA.

WARNING
DO NOT OPERATE MACHINE WHEN DOOR IS OPEN.

ATTENTION
NE PAS FAIRE FONCTIONNER LA MACHINE LORSQUE LA PORTE EST OUVERTE.

LET OP!
DE MACHINE NIET IN BEDRIJF STELLEN WANNEER DE DEUR GEOPEND IS.

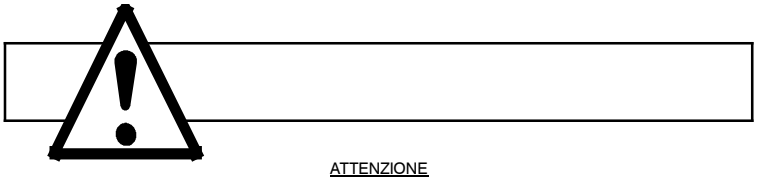
ACHTUNG
DIE MASCHINE NICH IN BETRIEB SETZEN, WENN DIE TÜR OFFEN IST.

ATENCIÓN
NO HACER FUNCIONAR LA MAQUINA CUANDO LA PUERTA ESTE ABIERTA.

LET OP!
STEL DE MACHINE NIET IN BEDRIJF WANNEER DE DEUR OPEN IS.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.24



ATTENZIONE
TOGLIERE L'ALIMENTAZIONE GENERALE (ARIA) SOLO CON
MACCHINA A FINE CICLO DI SEZIONATURA.

WARNING
SWITCH THE MAIN AIR SUPPLY OFF, WHEN THE MACHINE IS
AT THE END OF THE CUTTING CYCLE.

ATTENTION
TOURNER L'ALIMENTATION GENERALE (AIR) SEULEMENT
AVEC MACHINE A LA FIN DU CYCLE DE DECOUPE

LET OP!
SCHAKEL DE HOOFDTOEVOER (LUCHT) ALLEEN UIT WANNEER
DE MACHINE AAN HET EIND VAN DE ZAAGCYCLUS IS.

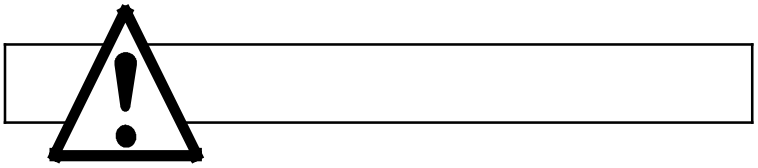
ACHTUNG
SCHALTEN SIE DIE HAUPTLUFTSPEISUNG AUS, NUR WENN DIE
ANLAGE AM ENDE DES AUFTEILENZYKLUS IST.

ATENCION
CURTAR ALIMENTACION GENERAL (AIRE) SOLAMENTE CON
LA MAQUINA A FINAL CICLO DE CORTE.

LET OP!
SCHAKEL DE HOOFDTOEVOER (LUCHT) ALLEEN UIT WANNEER
DE MACHINE AAN HET EIND VAN DE ZAAGCYCLUS IS.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.22



ATTENZIONE
TOGLIERE L'ALIMENTAZIONE GENERALE PRIMA DI USARE
SALDATRICI ELETTRICHE VICINO ALL'IMPIANTO.

WARNING
BEFORE USING ANY ELECTRICAL WELDING EQUIPMENT NEAR THE
GIBEN SYSTEM, PLEASE SWITCH THE MAIN POWER SUPPLY OFF.

ATTENTION
TOURNER L'ALIMENTATION GENERALE (ELECTRIQUE) AVANT D'UTILIZER
DES SOU DEUSES ELECTRIQUES PRES DE L'INSTALLATION (GIBEN).

LET OP!
SCHAKEL DE HOOFDSTROOMTOEVOER UIT VOORDAT U ELEKTRISCHE
LASAPPARATEN GEBRUIKT IN DE BUURT VAN DE MACHINE.

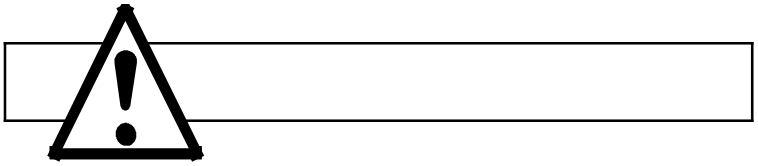
ACHTUNG
BEVOR SIE ELEKTRISCHE SCHWEISSMASCHINE NEBEN DER ANLAGE
BENUETZEN, SCHALTEN SIE BITTE DEN HAUPTSCHALTER AUS.

ATENCIÓN
CORTAR ALIMENTACION GENERAL ANTES DE UTILIZAR SOLADURA
ELECTRICA PROXIMA A LA INSTALACION.

LET OP!
KOPPEL DE STROOMTOEVOER AF ALVORENS IN DE BUURT VAN DE INSTAL-
LATIE
ELEKTRISCHE LASAPPARATUUR TE GEBRUIKEN.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.26



ATTENZIONE
CON L'APERTURA DELL'INTERRUTTORE GENERALE, L'ALIMENTAZIONE PNEUMATICA NON É ISOLATA.

WARNING
WHEN THE MAIN SWITCH IS OPEN THE PNEUMATIC SUPPLY IS NOT ISOLATED.

ATTENTION
EN ACTIONNANT L'INTERRUPTEUR GÉNÉRAL (MARCHE), L'ALIMENTATION PNEUMATIQUE N'EST PAS ISOLÉE.

LET OP!
WWANNEER DE HOOFDSCHAKELAAR WORDT GEOPEND, IS DE PNEUMATISCHE VOEDING NIET GEISOLEERD.

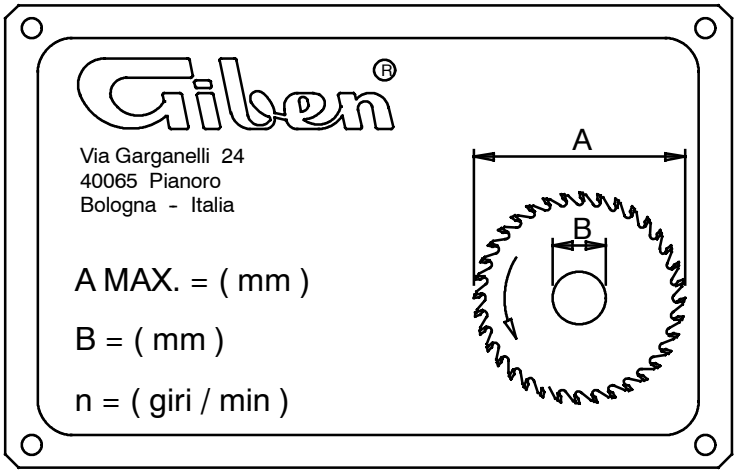
ACHTUNG
BEI GEÖFFNETEM HAUPTSCHALTER IST DIE DRUCKLUFTZUFUHR NICHT ISOLIERT.

ATENCIÓN
AL ABRIR EL INTERRUPTOR GENERAL, LA ALIMENTACIÓN NEUMÁTICA NO SE AÍSLA.

LET OP!
WWANNEER DE HOOFDSCHAKELAAR WORDT GEOPEND, IS DE PNEUMATISCHE TOEVOER NIET GEÏSOLEERD.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.36



COD. AA06100

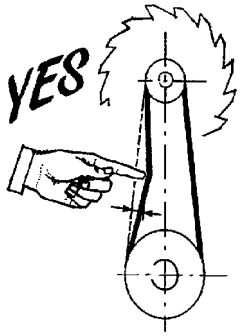
ATTENZIONE :
TRASMISSIONE A CINGHIA DENTATA !
UN TENSIONAMENTO ECCESSIVO
PUO' PROVOCARE FUNZIONAMENTI ANOMALI.
PER UN CORRETTO TENSIONAMENTO DELLE CINGHIE CONSULTARE CON ATTENZIONE IL MANUALE USO E MANUTENZIONE.

WARNING :
TOOTHED BELT DRIVE !
EXCESSIVE BELT TENSION MAY CAUSE OPERATIONAL MALFUNCTIONS
FOR CORRECT BELT TENSIONING PLEASE REFER TO YOUR USER MANUAL.

ATTENTION :
TRANSMISSION PAR COURROIE CRANTÉE!
UNE TENSION EXCESSIVE PEUT PROVOQUER DES ANOMALIES DE FONCTIONNEMENT.
POUR UNE TENSION CORRECTE DES COURROIES, CONSULTER ATTENTIVEMENT LE MANUEL D'ENTRETIEN.

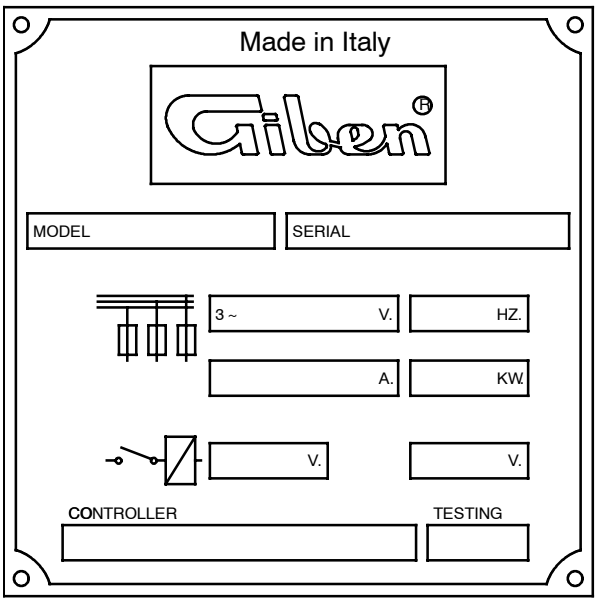
ACHTUNG :
ZAHNRIEMENANTRIEB!
ZU HOHE RIEMENSPANNUNG KANN UNREGELMÄSSIGE FUNKTIONEN HERVORRUFEN.
FÜR EIN RICHTIGES SPANNEN DER ZAHNRIEMEN BITTE UNBEDINGT NACH VORSCHRIFT DES HANDBUCHES VORGEHEN.

ATENCIÓN :
TRANSMISION A CORREA DENTADA!
UN TENSIONADO EXCESIVO PUEDE PROVOCAR FUNCIONAMIENTOS ANOMALOS.
PARA UN TENSIONADO CORRECTO DE LAS CORREAS CONSULTAR CON ATENCION EL MANUAL DE USO Y MANTENIMIENTO.

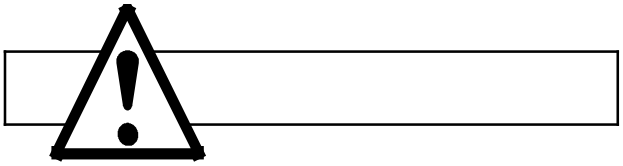


INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.21



COD. 2050112
COD 2050112.01



ATTENZIONE
NON ENTRARE PER NESSUN MOTIVO NEL PERIMETRO DELIMITATO
DALLE BARRIERE DI PROTEZIONE CON LA MACCHINA IN FUNZIONE.

WARNING
ON NO ACCOUNT ENTER THE AREA ENCLOSED BY
THE BARRIER WHEN THE MACHINE IS IN OPERATION.

ATTENTION
IL EST FORMRLLEMENT INTERDIT DE FRANCHIR LES
BARRIERES QUAND LA MACHINE EST EN MARCHE.

LET OP!
MEN DIENT OM GEEN ENKELE REDEN VOORBIJ DEZE HEKKEN
TE KOMEN WANNEER DE MACHINE IN WERKING IS.

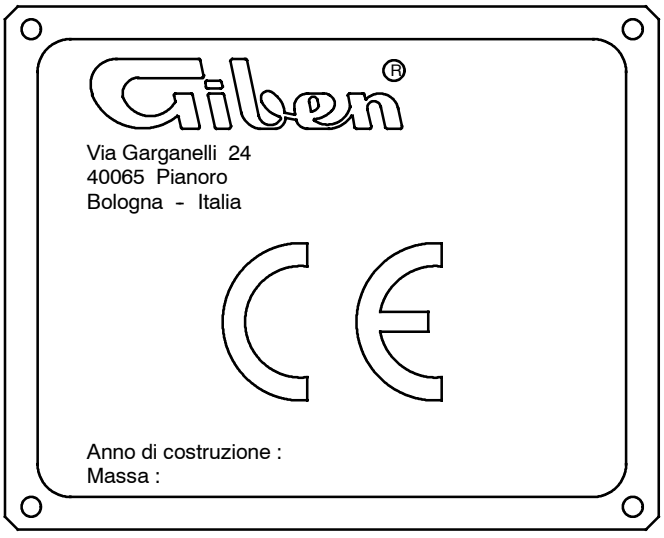
ACHTUNG
AUF KEINEN FALL DEN VONDEN SCHRANKEN BEGRENZTEN RAUM
BEI FUNKTIONIERENDER MASCHINE BETREN.

ATENCIÓN
MIENTRAS LAS MAQUINAS ESTEN EN FUNCIONAMIENTO
NO REBASEN LAS BARRERAS BAJO NINGUN CONCEPTO.

LET OP!
KOM, WANNEER DE MACHINE IN WERKING IS, OM GEEN
ENKELE REDEN BINNEN HET GEBIED DAT WORDT AFGEBAKEND
DOOR DE BESCHERMINGEN.

INGLESE – FRANCESE – FIAMMINGO – TEDESCO – SPAGNOLO – OLANDESE

COD. AA05868.28

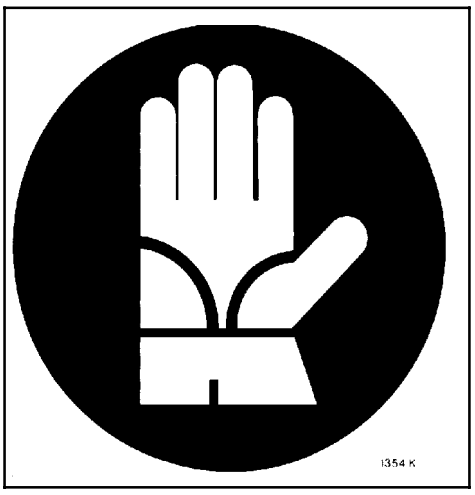


COD. AA0132945

COD. AA0146722

COD. AA0146715

COD. AA0146714



COD. AA0146724

9. CONTROL PANEL AND STARTING THE MACHINE

9.1. CAUTION

Before connecting the power supply cables to the machine check that power supply voltage and frequency are the same as those given on the plate on the electrical cabinet. Once the machine has been connected up, press the START BLADES push–button to start blade rotation and then stop immediately the machine by pressing the EMERGENCY push–button. While the blades are rotating, check their direction of rotation. If the blades are not rotating in the correct direction, invert the two phase wires.

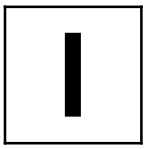
ATTENTION !!
BEFORE STARTING A CUTTING CYCLE, CHECK THAT THE MAIN SWITCH IS ON, AND NONE OF THE SAFETY DEVICES ARE OPERATING : THE EMERGENCY PUSH–BUTTON MUST BE OFF, THE BLADE COVER MUST BE CLOSED AND THE SAFETY BAR MUST BE UNOBSTRUCTED. IF THE PANEL SAW WILL NOT START, ALSO CHECK THE AUTOMATIC SWITCHES INSIDE THE ELECTRICAL CABINET; THEY MUST BE IN POSITION 1 OR ON.

9.2. CONTROL PANEL

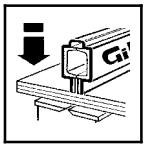
The following paragraphs describe machine functions with the relative symbols; these will enable rapid consultation by the operator of all functions on machines fitted with the programmer GDrive.

9.3. PRISMATIC SP - PROGRAMMING

SYMBOL ***FUNCTION***



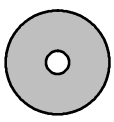
MAIN START–UP
This controls rotation of the main saw and the scoring saw and is essential to machine functions. No machine commands can be given until the blades have started.



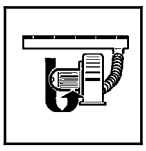
CUTTING CYCLE START AND BLADE CARRIAGE RETURN
The cycle sequence is as follows : the pressure beam is lowered, the saw blade is raised above the work surface and the saw carriage starts sawing operations. Once cutting operations have been completed the blade is lowered beneath the work surface and the saw carriage returns to its starting position. To continue cutting operations, press the push button again.

PUSHER FORWARD COMMAND

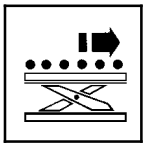
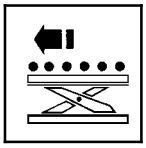
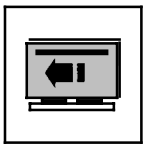
PUSHER FORWARD COMMAND



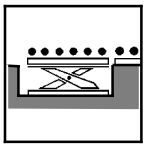
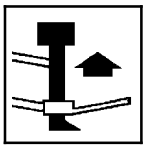
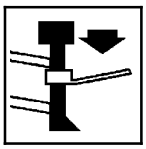
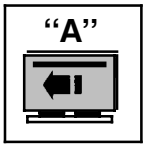
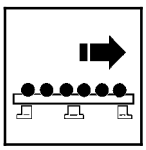
EMERGENCY STOP
When this button is pressed, the following sequence occurs : the saw carriage stops in its current position, the blades are lowered beneath the work surface and stop rotating, the pressure beam is raised. To return to normal operations, press the emergency push button once again.

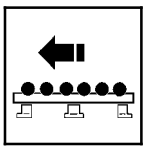
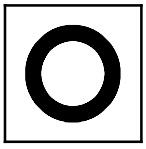
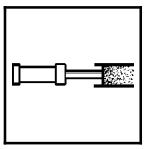
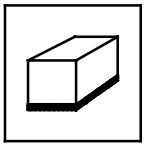
SYMBOL	*FUNCTION*
	BLADE CARRIAGE STOP IN SCORER ADJUSTMENT POSITION This stops the saw carriage to the end of the cutting stroke with the blade in the raised position so that the scoring saw can be adjusted from the outside.
	LATERAL ALIGNER FORWARD MOVEMENT
	LATERAL ALIGNER REVERSE MOVEMENT
	**AIR GENERATOR START–UP**

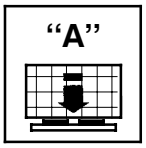
9.4. PRISMATIC SPT - PROGRAMMING

SYMBOL	*FUNCTION*
	LIFT TABLE MANUAL ASCENT
	LIFT TABLE MANUAL DESCENT
	**TABLE ROLLER MOVEMENT RIGHT**
	**TABLE ROLLER MOVEMENT LEFT**
	**BARRIER OPEN ENABLE COMMAND**

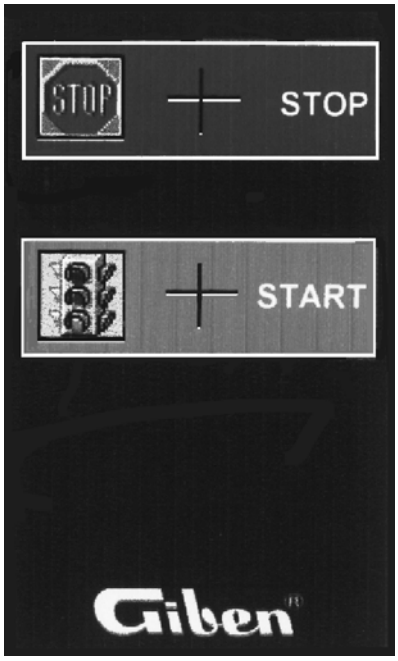
9.5. OPTIONALS

SYMBOL	*FUNCTION*
	**LOADING LEVEL FOR RECESSED LIFT TABLE** The flashing light indicates that the lift table is in the loading position.
	**ADJUSTABLE PUSH POINTS** Ascent command
	**ADJUSTABLE PUSH POINTS** Descent command
	**BARRIER SIDE "A" OPEN ENABLE COMMAND**
	**ROLLERWAY -- MOVEMENT RIGHT**

SYMBOL	*FUNCTION*
	**ROLLERWAY -- MOVEMENT LEFT**
	AIR PRESSURE REGULATED ON THE CLAMPS
	**MAIN STOP**
	**PUSH POINTS ACTIVATION COMMAND FOR MATERIAL WITH PROTRUDING EDGES**
	**PROTECTION PANEL ACTIVATION COMMAND**

SYMBOL	*FUNCTION*
	BULKHEAD "A" ENABLING COMMAND
	BULKHEAD "A" -- OPEN COMMAND
	**BULKHEAD "A" -- CLOSE COMMAND**

9.6. REMOTE CONTROL FUNCTIONS (OPTIONAL)

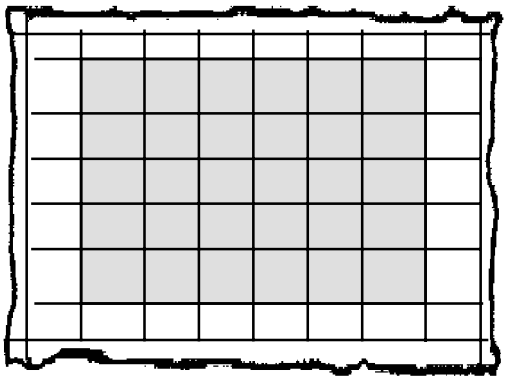
SYMBOL	*FUNCTION*
	**CYCLE STOP**
	CYCLE START

10. ADJUSTING THE MACHINE

10.1. TESTING

Chapter Cap 3.5 of the manual specifies the type of materials that can be used on Giben cutters. Note however that materials are occasionally internally stressed due to processing techniques used during panel formation. For this reason, panels that are stored without any special precautions can deform to varying extents.

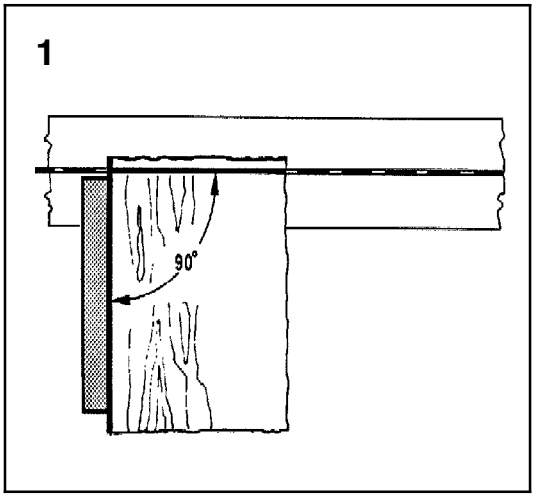
Bear in mind that during machine testing, panels with less stress and minor deformation must be used to ensure that cutting parameter settings are made correctly. When checking cutting operations, the central area of the cut pack (fig.) only should be considered.

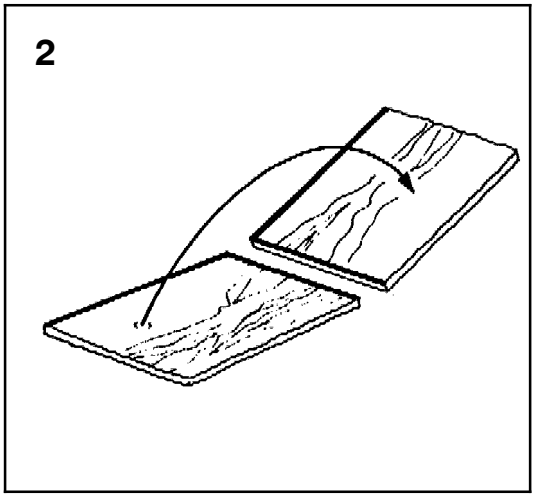


10.2. CHECKING AND ADJUSTING THE FENCES

1) Take the panels measuring approximately 1500 x 1300 mm, placing them one on top of the other. Trim the long sides.
Rest the trimmed side against the fence and trim the short sides.

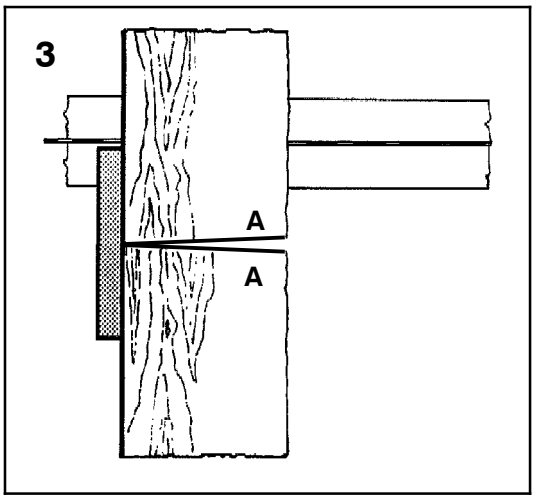
2) Turn the top panel over, as shown in the drawing.

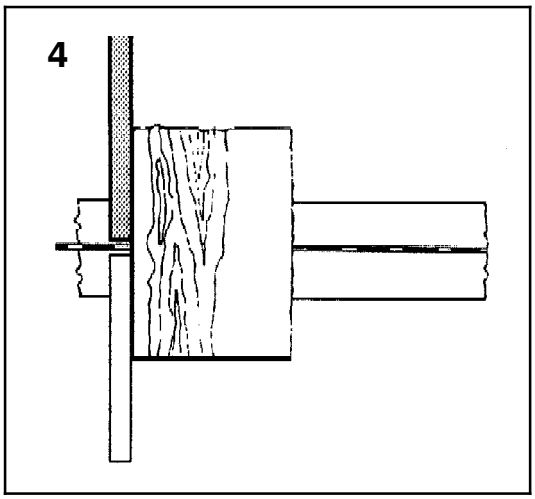




3) Rest the two panels against the fence. If the fence is at right angles to the cutting line, the two A sides of the panels will match perfectly. If they do not match (see the example), correct the positioning of the fence and repeat the cutting test on the short side of the panel until the two A sides are perfectly matched.

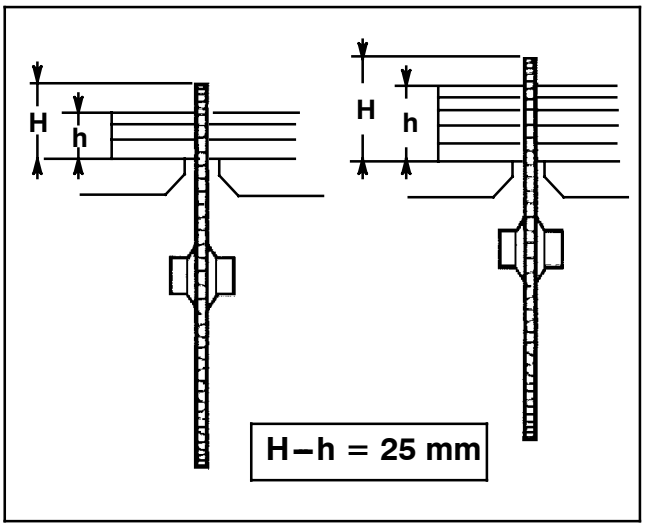
4) Once the front fence is at90° to the trimmed side of the panels, clamp the rear fence in line with the front one.





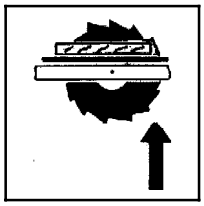
10.3. ADJUSTING MAIN BLADE

In order to ensure a straight blade path during cutting, the blade must not project by more than 25 mm above the cut panel.
Blade projection must be adjusted in accordance with the height of the stack of panels being cut so as to maintain optimum blade projection.



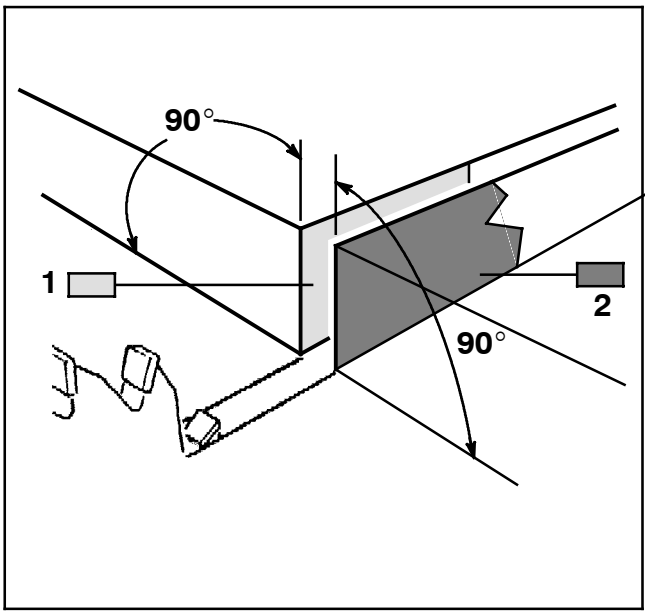
The machine is fitted with a system which automatically stops raising of the saw blade in accordance with the height of the stack of panels being cut. This function is selected, before starting the cutting cycle, by turning the selector switch to position 1. With the selector switch turned to position 2 (i.e. automatic adjustment off), the saw blade will be raised to its maximum projection.

1


2

10.4. CHECKING BLADE AND MACHINE TABLE SQUARENESS

The saw blade must be perpendicular to the machine table in order to ensure cut surfaces (1 and 2) that are squared and at an angle of 90°.

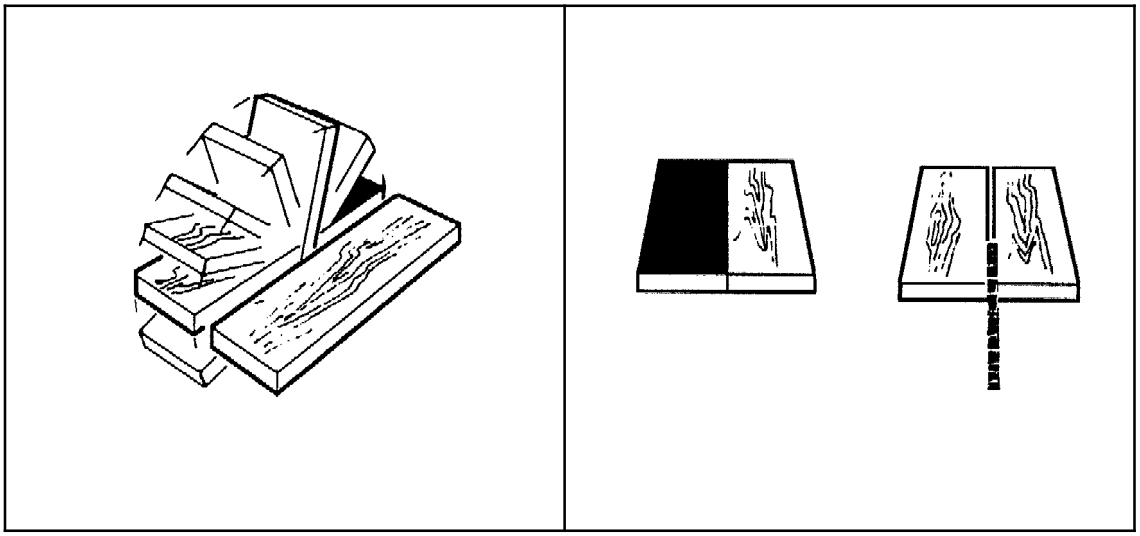


To check that the blade is correctly squared up to the machine table, proceed as follows:

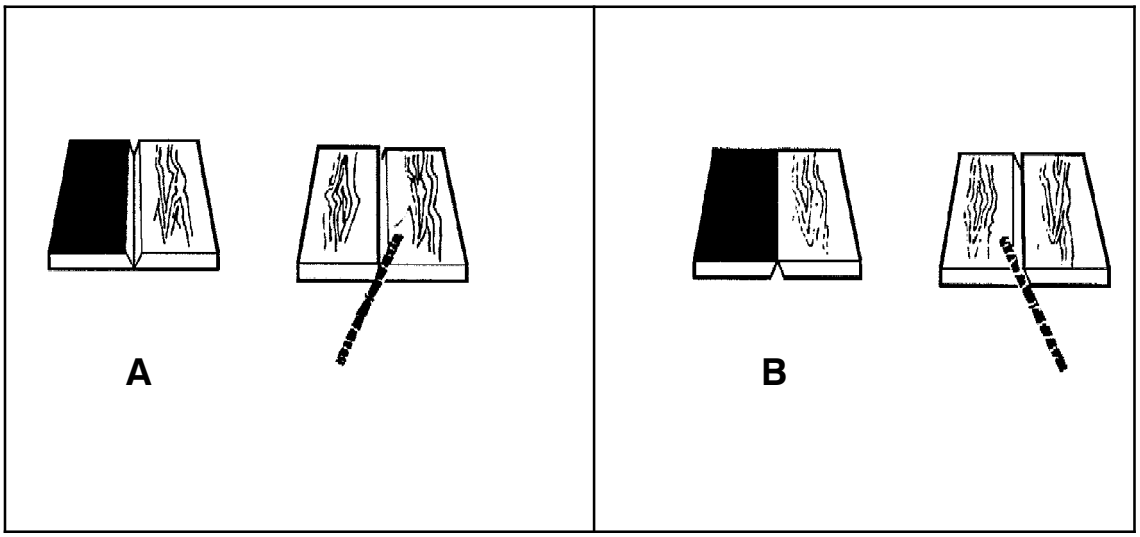
–Take a wooden panel 40–50 mm thick and cut it lengthways. For the sake of clarity let us imagine that the topside of the panel is white and the underside is black.

–Turn one of the pieces through 180° on its transverse axis so that you now have one black side next to one white side.

–Match up the two cut surfaces; if the two surfaces touch all the way along the cut, then the blade is correctly squared up to the work surface of the machine.



If on the other hand the cut surface do not touch at the top A or the bottom B of the cut, then the saw blade is not perpendicular to the work surface.

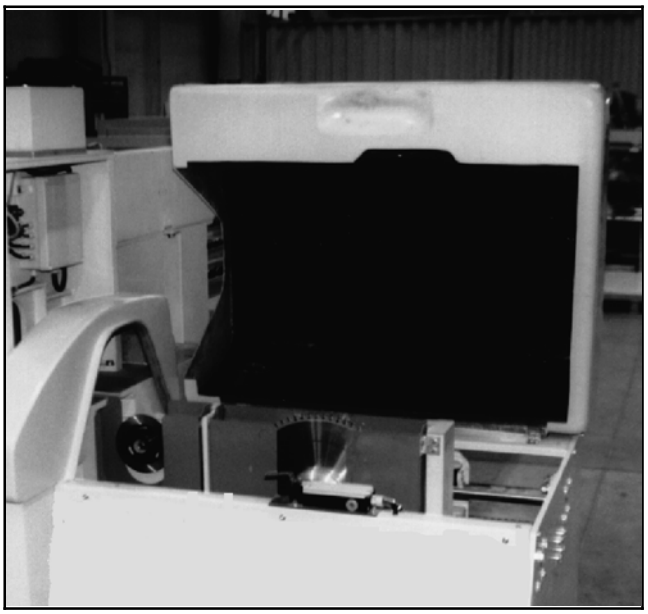


N.B. The angles have been exaggerated in the drawings for demonstration purposes.

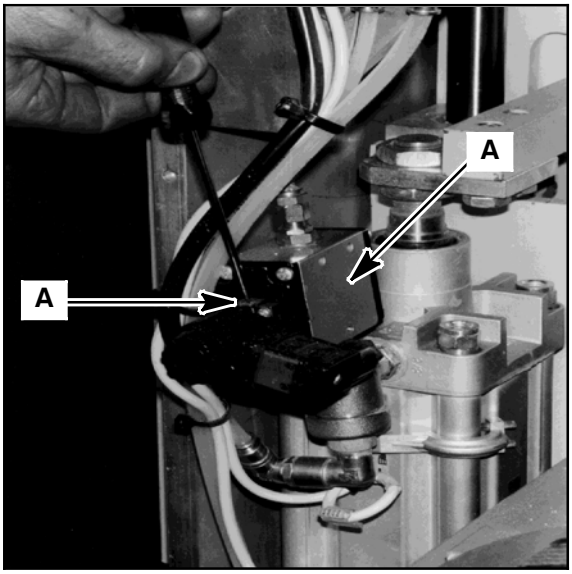
Blade/machine surface squareness is adjusted by our test personnel before the machine leaves our works and does not normally require further adjustment. If, however, it becomes necessary to adjust the machine, proceed as follows:

CHECKING SQUARENESS

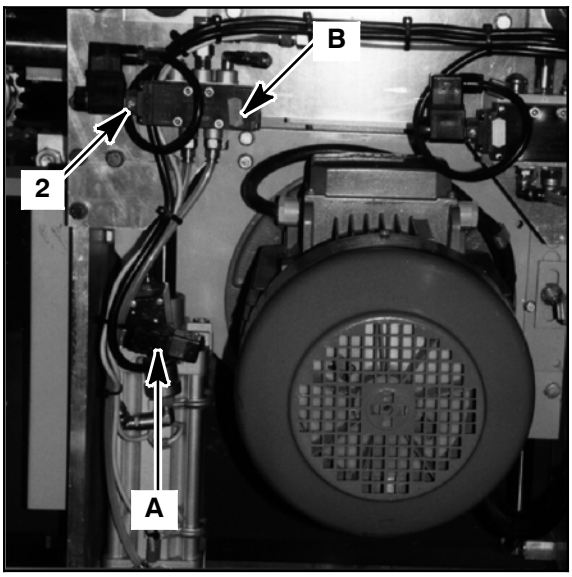
– To make the machine safe for maintenance work, move the saw carriage (1) to the end of its return stroke and raise the blade inspection cover.



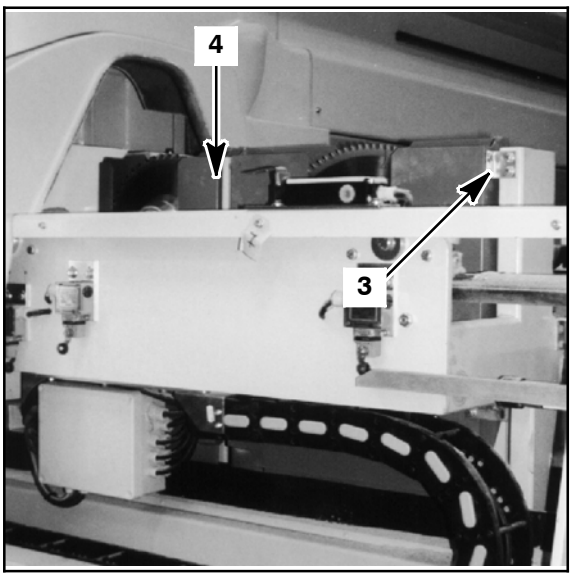
–Energize solenoid valve (A) which enables the blade hub to lift. To do so, turn screw (1) clockwise all the way. Once this has been done, blade hub will be at the top end of its stroke.



–Energize solenoid valve (B) which lifts blade hub. Turn screw (2) clockwise all the way. Once this has been done, blade hub will be at the top end of its stroke.



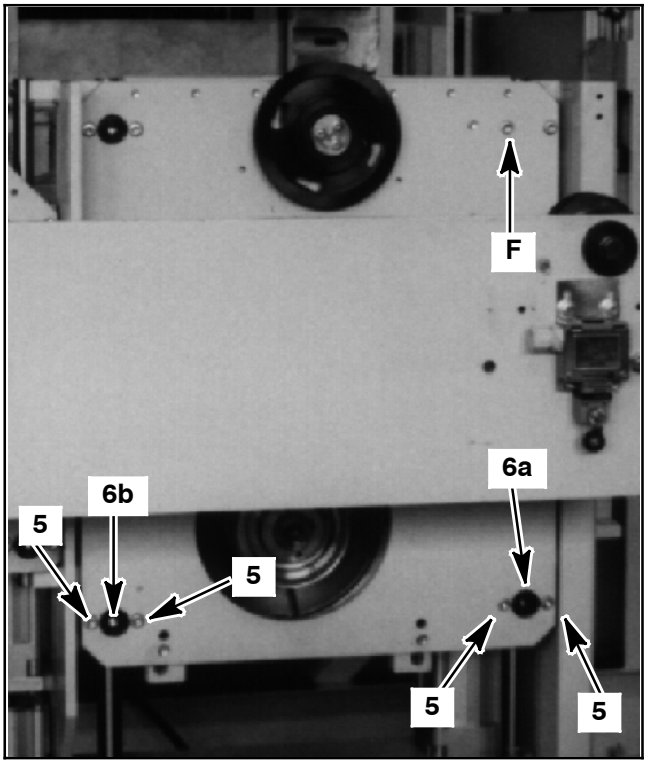
–Remove blade (see instructions 11.4.). Remove the four plates (3).
Lower guard (4) which conveys dust to suction channel and remove it from the side.



Loosen screws slightly (5). Turn screw (6b) in order to adjust blade perpindicularity.
Hub plate is pivoted at point F therefore:
turn screw (6a) clockwise to move the top of the blade away from the operator and counterclockwise to move it closer to the operator.

After adjusting tighten screws (5) and (6b).

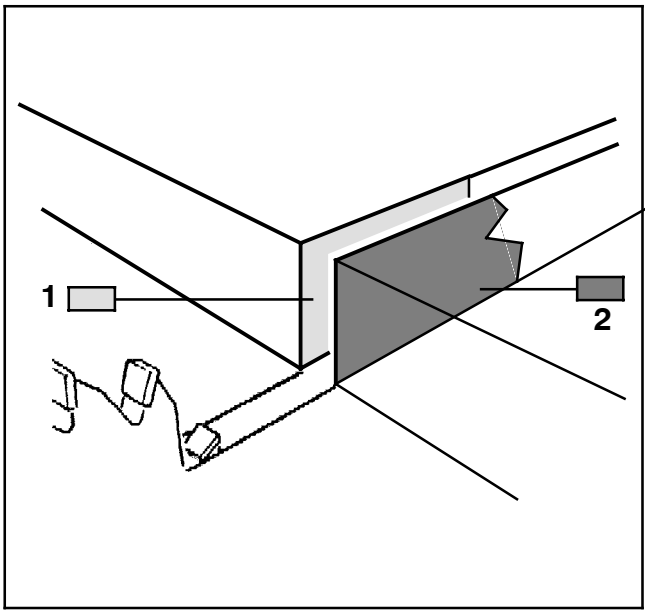
Scoring blade perpendicularity can be adjusted in the same way as the main blade.
Obviously, to raise scoring blade hub use the related lift solenoid valve.



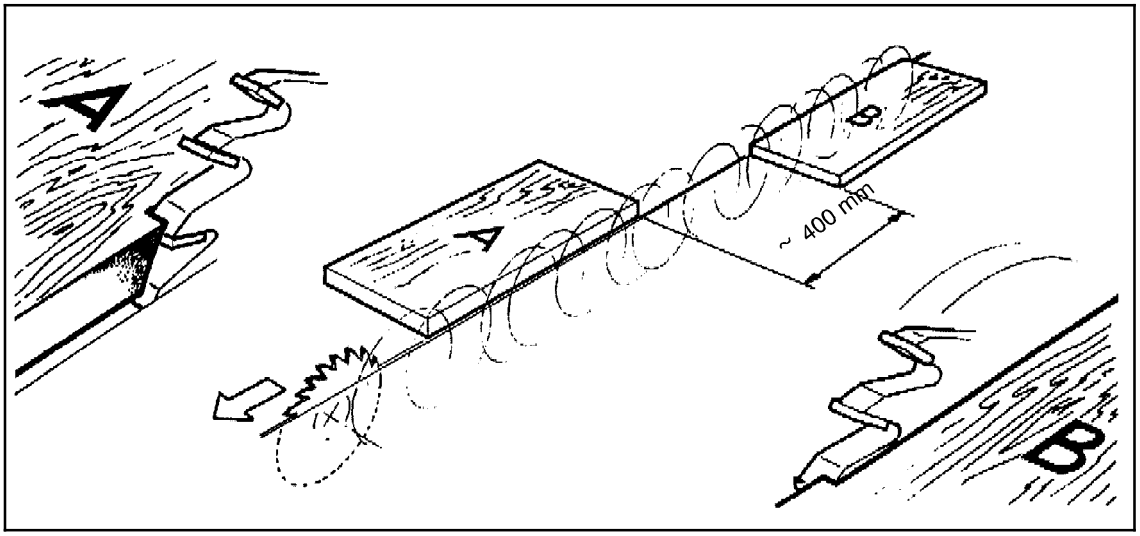
10.5. ADJUSTING BLADE AND CUTTING LINE PARALLELISM

The saw blade must be parallel with the cutting line in order to guarantee clean, chip–free cut surfaces (1 and 2).

To check that the blade is parallel to the cutting line, proceed as follows:



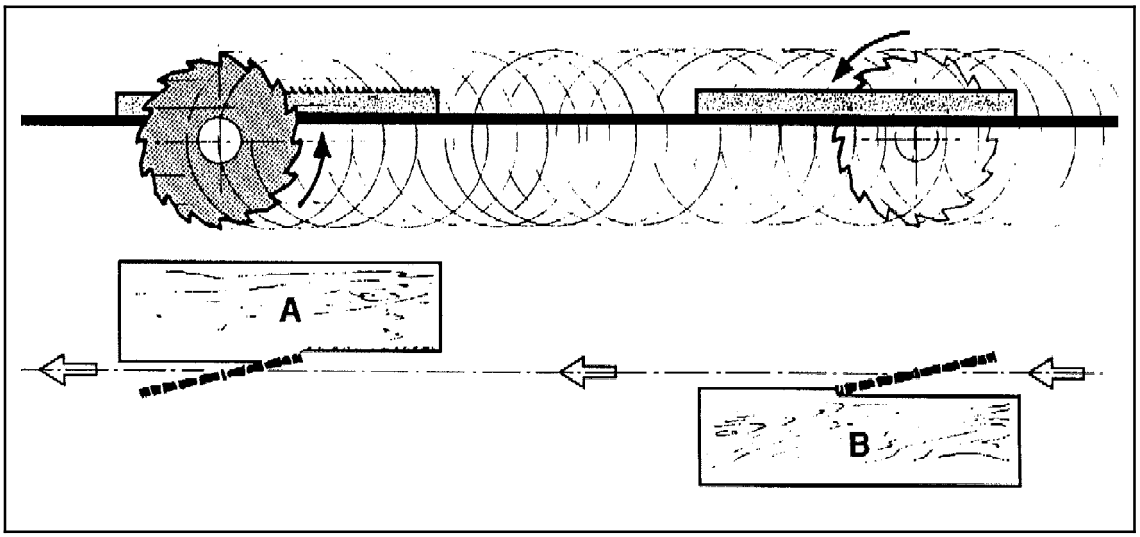
–Take two coated panels A and B which are approximately twice as long as the blade diameter and 20 mm wide. Put them on either side of the cutting line (see the drawing) and trim cut them with a sharp saw (preferably a new one).



N.B. Use coated panels. These will show up any chips clearly if the blade is not parallel to the cutting line.

– If the blade is not parallel in the direction shown in the drawing then the cut panel B will be good (it is assumed that the scoring saw is operating) but the cut on panel A will be chipped on the topside.
This is because panel B is cut with the front portion of the blade (i.e. with the teeth cutting downwards) while panel A is cut with the rear portion of the blade (i.e. with the teeth cutting upwards).

– If the blade is out or parallel in the opposite direction to that shown in the drawing, then panel B will be chipped on the topside and panel A will be cut perfectly. In either case it will be necessary to readjust the blade so that it is parallel to the cutting line.



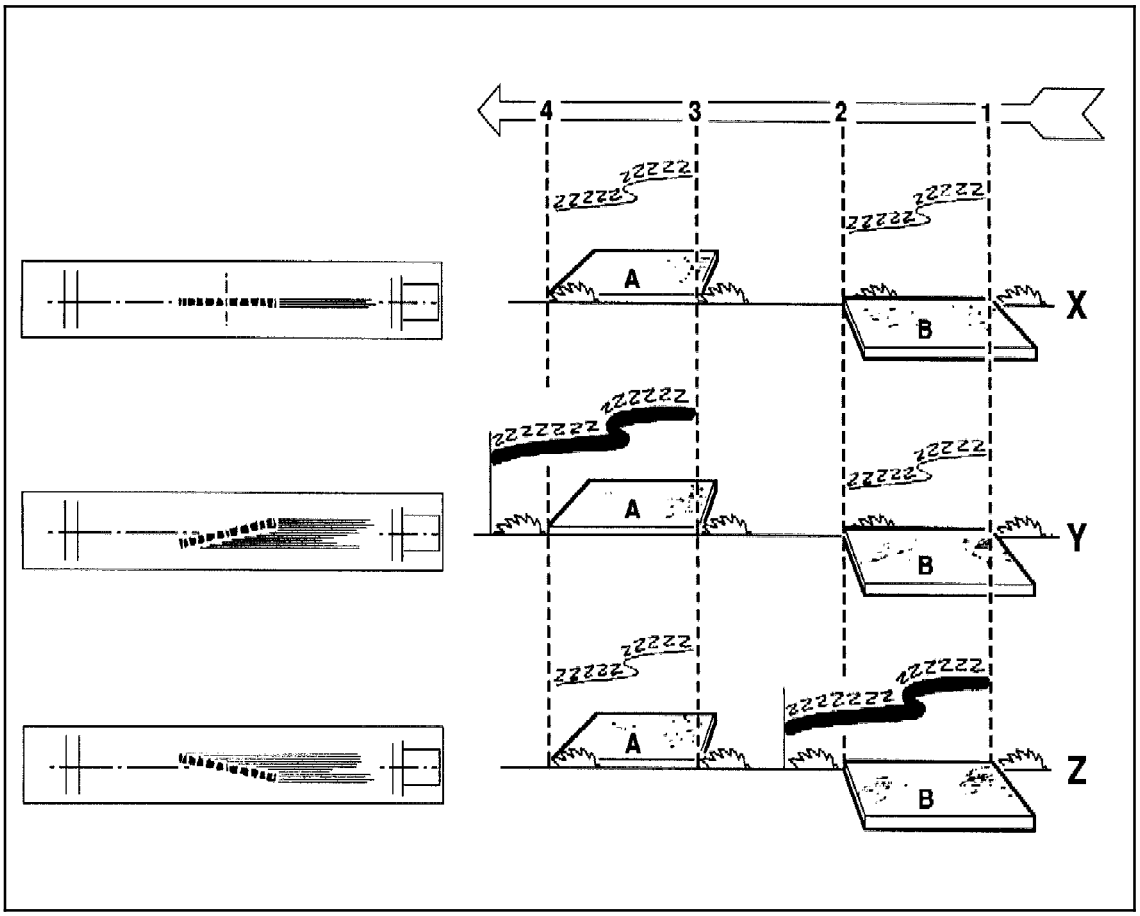
N.B. The angles have been exaggerated in the drawings for demonstration purposes.

Another factor that will help you to understand whether the blade is parallel or not, is to establish which side of the blade the noise comes from during cutting.

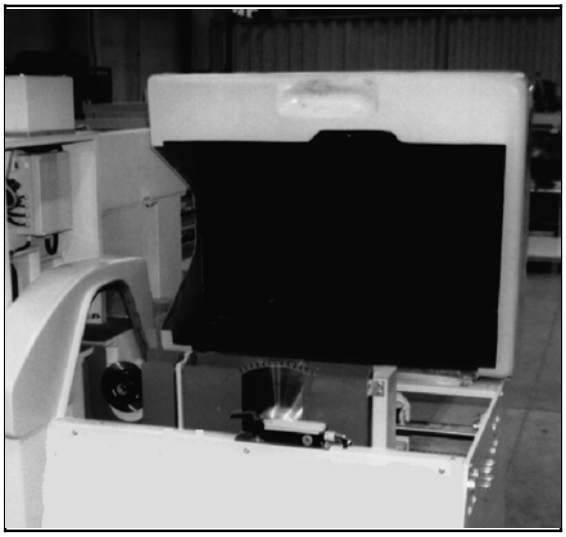
Example X: parallelism is correct. During blade travel the cutting noise can be heard between point **1** and **2** and between points **3** and **4** (as the blade begins to cut into the panel and as the blade leaves the panel).

Example Y: parallelism is incorrect in the direction shown in the drawing. The cutting noise will be heard until the blade has completely left panel**A**.

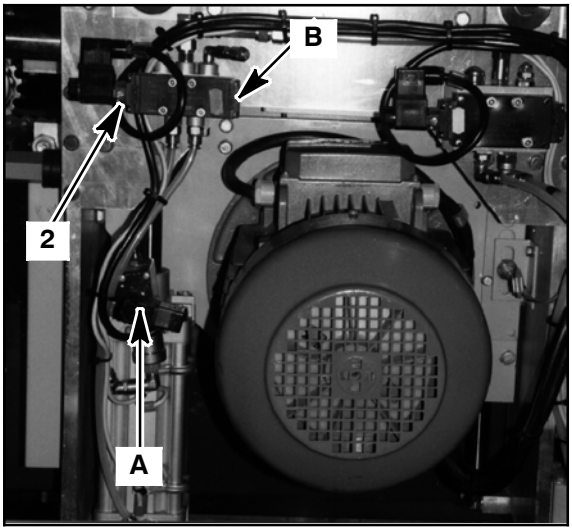
Example Z: parallelism is incorrect in the opposite direction. The cutting noise will be heard until the blade has completely left panel **B**. The prolongation of cutting noise in examples Y and Z are indicators that the blade is not parallel and that the teeth are still cutting at the back as the blade leaves the panels so that the rear coating of the panel is being chipped.



PARALLELISM ADJUSTMENT

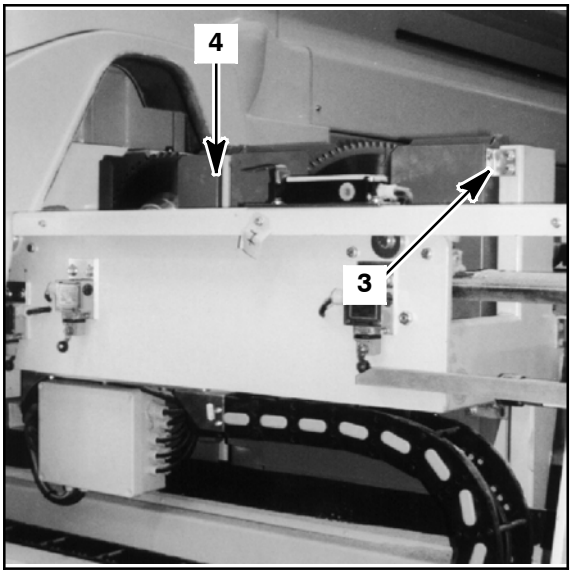


The blade/cutting line parallelism was adjusted at our works prior to despatch and does not normally require further adjustment. If, however, it becomes necessary to adjust the machine, proceed as follows:
– To make the machine safe for maintenance work, move the saw carriage (1) to the end of its return stroke and raise the blade inspection cover.



As described for the adjustment of blade perpendicularity, energize solenoid valve (A) which enables the blade hub to lift by turning screw (1) clockwise all the way. Once this has been done, blade hub will be at the top end of its stroke.
– Energize solenoid valve (B) which lifts blade hub. Turn screw (2) clockwise all the way.

Once this has been done, blade hub will be at the top end of its stroke.
– Remove blade (see instructions 11.4.).
Remove the four plates (3). Lower guard (4) which conveys dust to suction channel and remove it from the side.

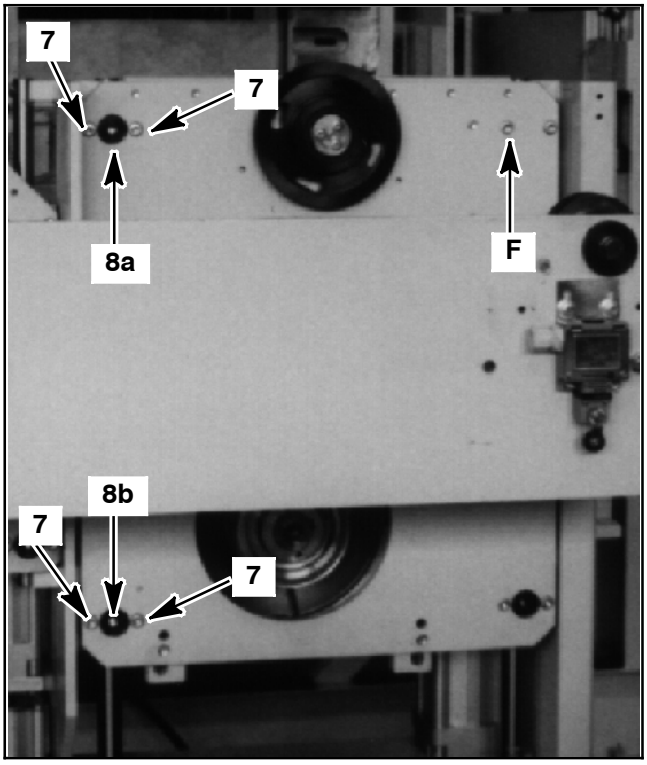


Disassemble the blade (see instructions, chapter 11.4.) and the blade support plates (3).
Lower the extraction hood (4) into the dust conveyor channel and extract from the side.

Loosen screws slightly (7). Turn screw (6a) in order to adjust blade perpindicularity.
Hub plate is pivoted at point F therefore:
turn screw (8a) clockwise to move the top of the blade away from the operator and counterclockwise to move it closer to the operator.

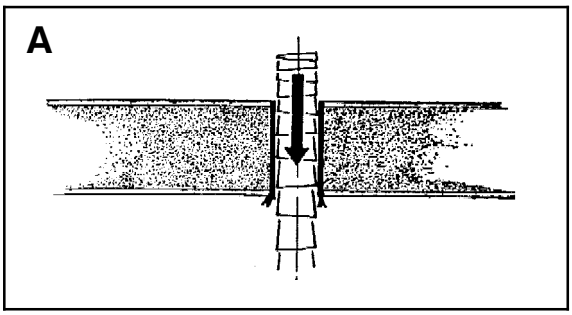
After adjusting tighten screws (7) and (8b).

Scoring blade perpendicularity can be adjusted in the same way as the main blade.
Obviously, to raise scoring blade hub use the related lift solenoid valve.

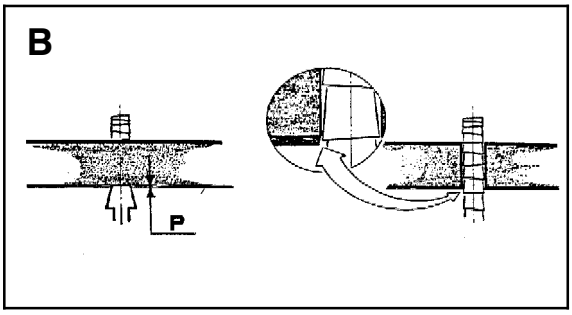


10.6. SCORING SAW

A : When cutting coated panels, the blade teeth are likely to knock against the side of the material facing the machine table, as they are being drawn back, slightly chipping the panel.

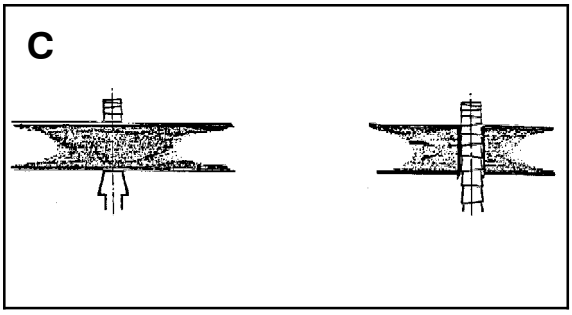


B : To avoid this problem, a second blade has been added, smaller in diameter to the panel saw blade, and with truncated conical teeth. This is known as the scoring blade. It precedes the main blade to cut the panel, so that by the time the main blade arrives the coating has already been scored. Obviously if cutting is to be top quality and there are to be no chips, the scoring blade must be in perfect alignment with the main blade and positioned so as to give the correct cutting depth **P**. Keep cutting depth to a maximum of 1.5 mm.
The drawing below shows what happens when scoring saw is correctly lined up: the panel is not chipped and bevelling is scarcely noticeable on either side.

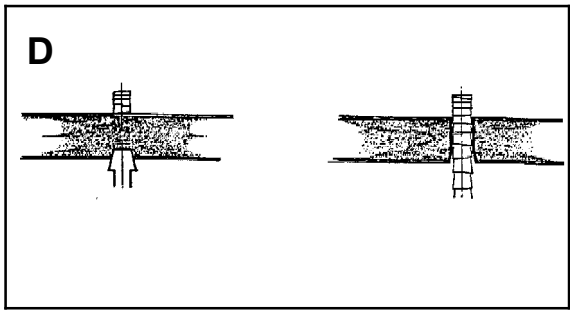


The result of incorrect horiziontal alignment and incorrect vertical scoring depth are as follows:

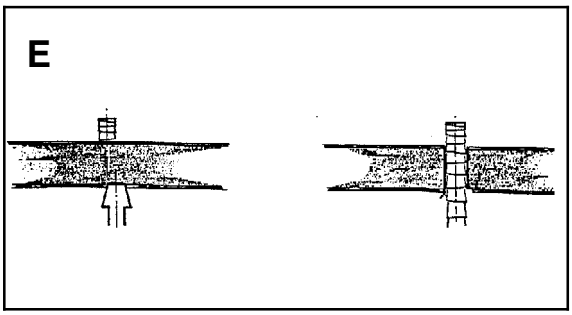
C : Scoring depth is insufficient. The panel is chipped on both sides of the cut.



D : Scoring depth is excessive. The panel is not chipped, but the two bevels are too deep. The scoring saw is also being subjected to excessive strain at this setting.



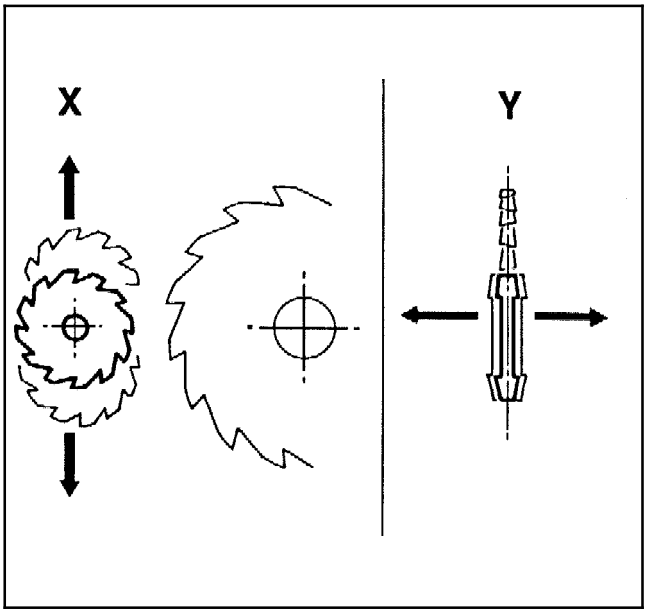
E : The scoring saw is offset. The panel is chipped on the side opposite the offset side and is stepped on the offset side.



N.B. Bevels, scoring cuts, etc. have been exaggerated in these drawings for explanatory purposes

The scoring saw position can be adjusted vertically (see fig. X) and horizontally (see fig. Y).

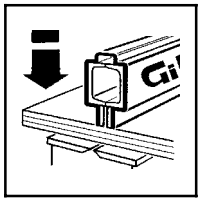
The scoring saw can be adjusted both manually and electrically (optional).



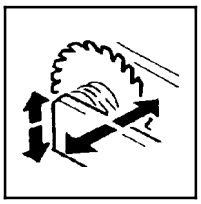
10.7. ELECTRICAL ADJUSTMENT OF SCORING SAW (OPTIONAL)

When this option is available on the machine, proceed as follows to make the adjustment:

a) From the pushbutton panel, first select the “CUTTING CYCLE” (1) command, then when the presser lowers press the “SCORING SAW ADJUSTMENT” (2) button.
This way the carriage stops after initially moving to perform the cut and returns to its limit position ready for the adjustment.



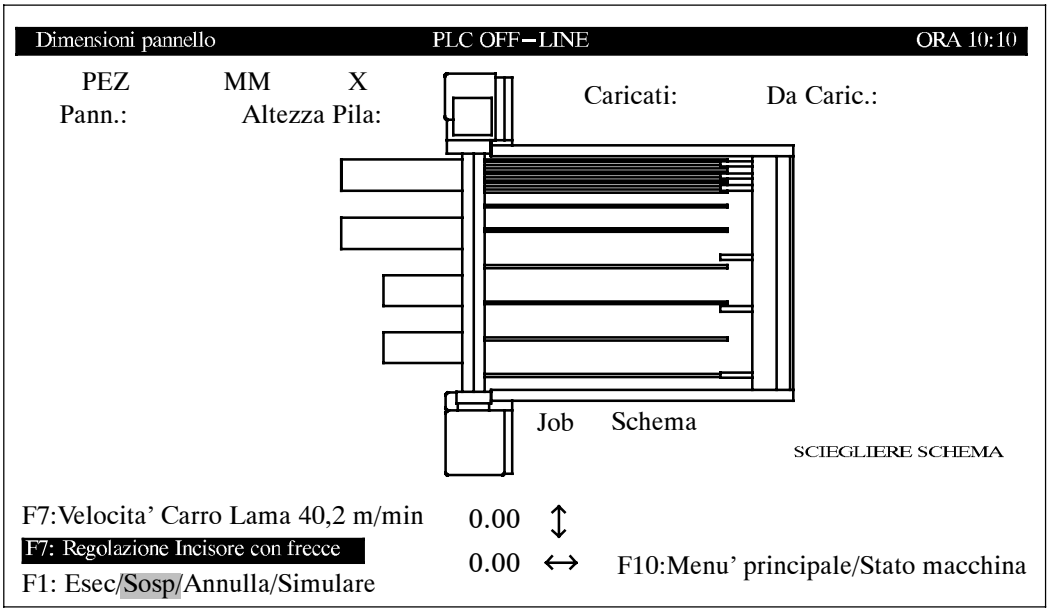
1



2

b) Press the <F7> key on the programmer until the text “SCORING SAW ADJUSTMENT” appears on the display together with a series of arrows next to the value 0.00 expressed in $^{1}/_{10}$ mm (FIG.3). Now press the corresponding arrows on the keyboard to move the scoring wheel, i.e. press <⇒> to move the scoring wheel to the right or <⇐> to move it to the left (relative to the operator in front of the blade carriage).

fig.3



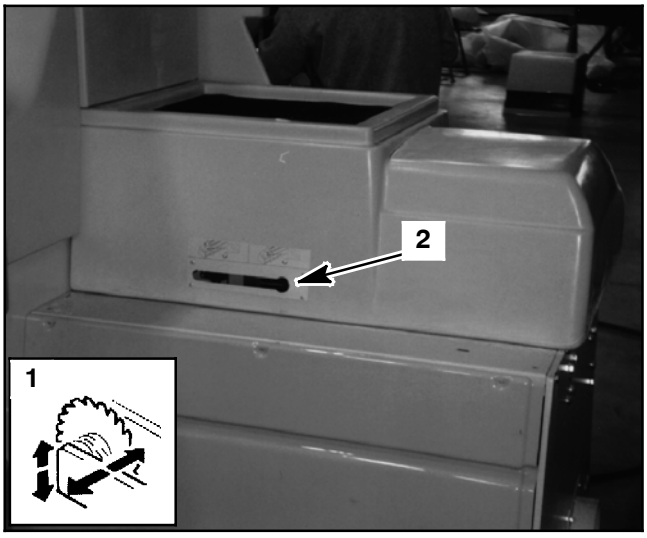
Each time the key is pressed to perform a horizontal movement of the scoring wheel, the values 0.00 shown on the display change by a fixed amount 0.25 $^{1}/_{10}$ mm, positive if the movement is to the right, negative if it is to the left. Similarly for vertical adjustment, the scoring wheel moves in a positive direction by 2.86 $^{1}/_{10}$ mm if <⇑> is pressed or in a negative direction if <⇓> is pressed.

IMPORTANT: The horizontal and vertical adjustments are not saved after quitting the "SCORING SAW ADJUSTMENT" function; i.e. after adjusting the scoring wheel and performing a cutting test, the values are reset on returning to scoring wheel adjustment.

c)To return the machine to the working condition after completing the adjustments, simply press the "SCORING WHEEL ADJUSTMENT" button again (it has remained on during the entire adjustment procedure).
After completing the operations, check that the scoring wheel has been correctly adjusted by performing a cutting cycle.

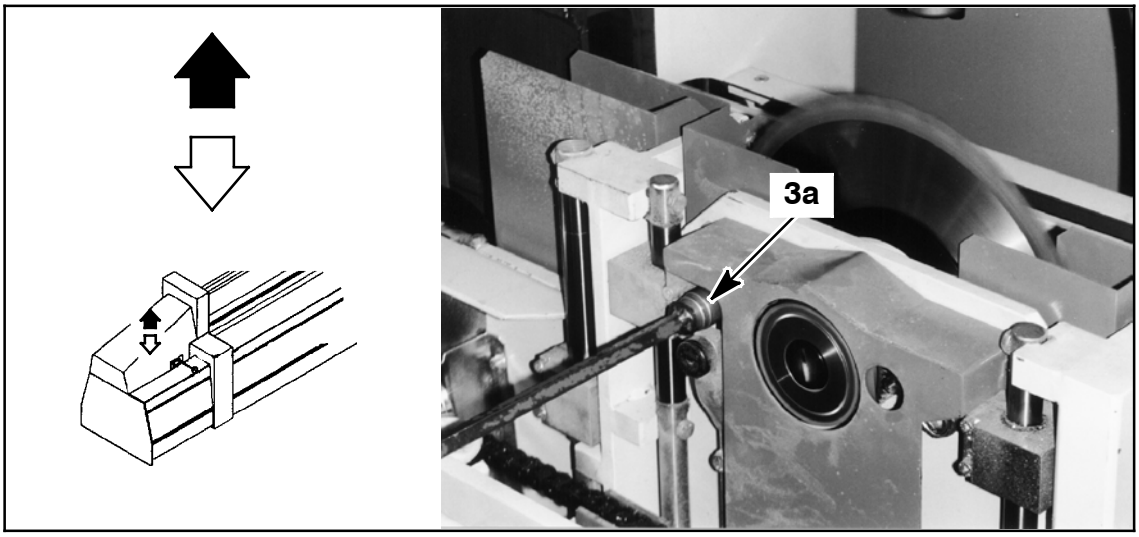
10.8. MANUAL ADJUSTMENT THE SCORING SAW

Adjustments can be made from the outside.
Select the scoring saw adjuster selector switch 1 (on the control panel) to the right. This will stop the blade carriage at the end of its return stroke with the blade raised and rotating; the blade compartment will be lit up.
Pass the spanner through the tunnel (1), look through the opening (2) and then adjust the scoring saw as follows:



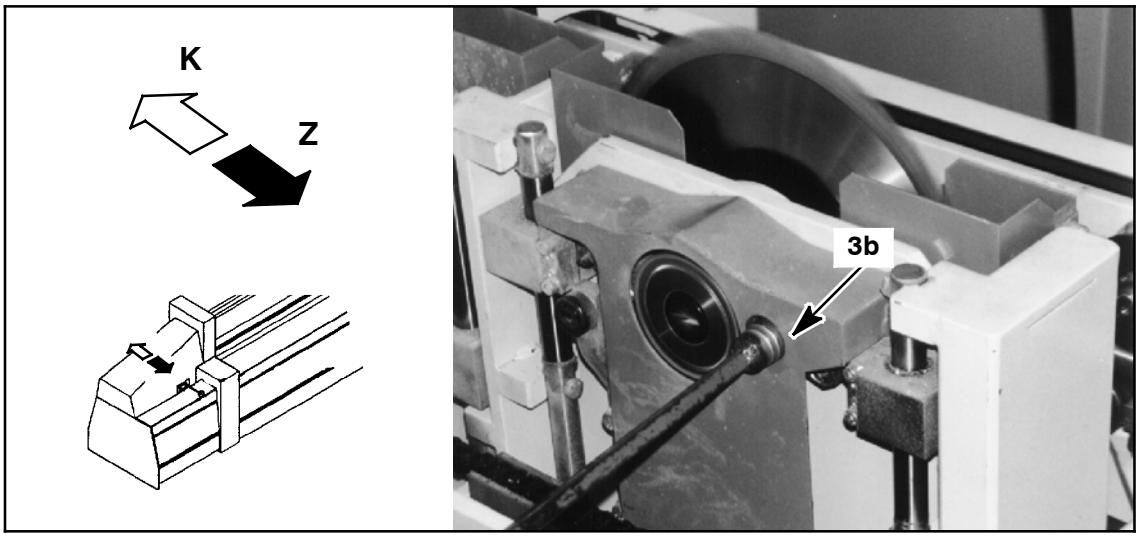
VERTICAL ADJUSTMENT

Adjust by inserting the Allen key into the screw (3a). To increase scoring saw projection, turn the Allen key clockwise. To decrease scoring saw projection, turn the Allen key anti-clockwise. The gear tooth pitch corresponds to an increment of 0.05 mm in scoring width.



HORIZONTAL ADJUSTMENT

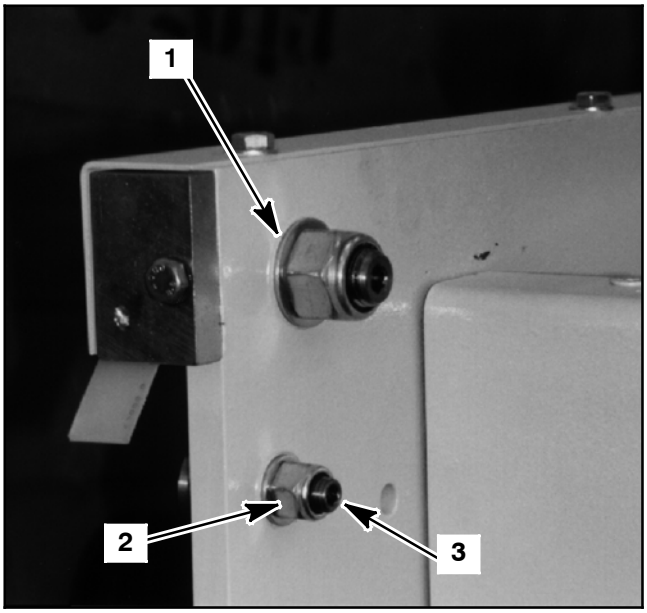
Horizontal adjustment centres the scoring saw blade in relation to the main blade. The scoring saw blade is moved sideways by turning the screw (3b). To adjust, proceed as follows:
Insert the Allen key in the screw (3b). Turn the Allen key clockwise to move the scoring saw unit in the direction shown by the arrow Z. Turn the Allen key anti-clockwise to move the unit in the direction indicated by the arrow K.
The gear tooth pitch corresponds to a horizontal shift of 0.025 mm.



☞ **Take great care when inserting the key in screw (3).**

10.9. ADJUSTING PUSHER PINION PLAY

The pusher guide wheels are positioned on an eccentric pivot.
In order to check on the play between the pinion and the rack, one must act upon the four pivots (1) turning them with a key.
In this way, the pusher carriage can be moved vertically.



At the rear of the pusher carriage there is an Aviprene pinion which acts as a counterweight when the grippers grip the stack of panels to be cut.
This pinion is mounted on an eccentric shaft to enable adjustment of the play between the rack and the pinion.
To adjust the play between the rack and the pinion, loosen the nut (2) and turn the screw (3) with a spanner to obtain the play required.

Important! Do not force the pinion onto the rack. Adjust so that they are slightly touching each other.

11. MAINTENANCE

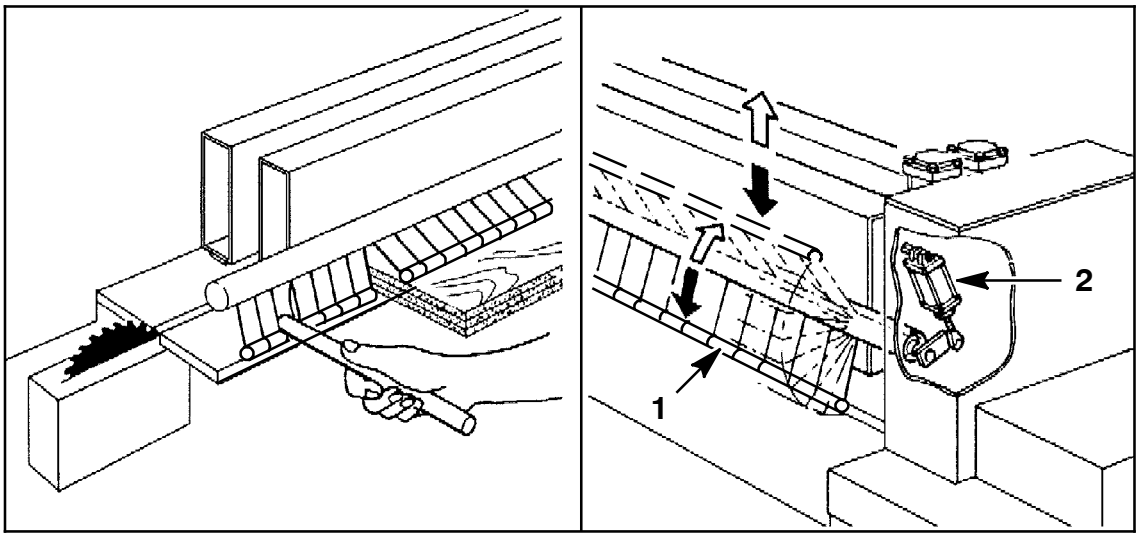
READ THE INSTRUCTIONS IN THE CHAPTER 8. CAREFULLY BEFORE CARRYING OUT ANY MAINTENANCE WORK.

11.1. PRESSURE BEAM

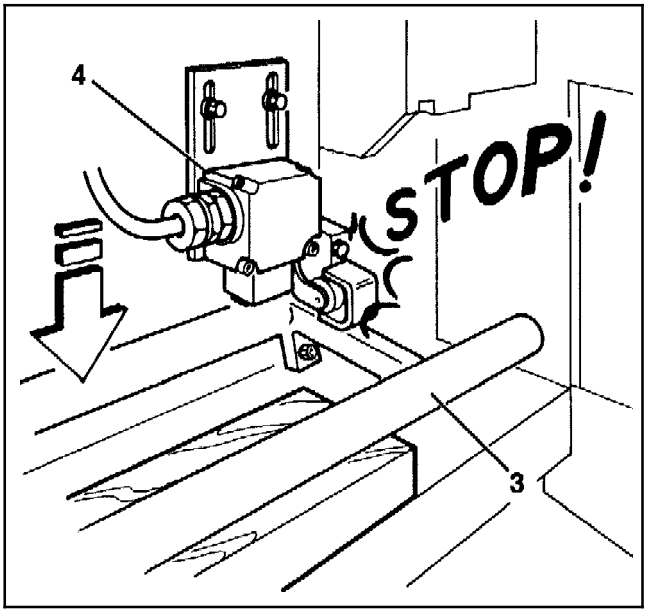
The pressure beam is operated by four pairs of pneumatic cylinders which ensure uniform pressure distribution. The pressure beam is kept parallel during movement by four interconnected sprockets controlled by a chain.

☞ When carrying out operations below the pressure beam, always use plugs or material spacers (e.g. wood panels) to prevent the pressure beam from falling suddenly. If the machine is not switched on, the pressure beam will only descend if the compressed air is disconnected.

Guard flaps (1) are attached to a tubular section extending the entire length of the pressure beam. The rotation of this tube is synchronized to the upward and downward movements of the pressure beam and prevents any access to the work table before the rotating saw blades are raised.
This means that the guard flaps will not allow any opening along the cutting length, thus making it impossible for anything (such as hands or objects) to get under the pressure beam.
The guard flaps also offer excellent protection in cases where the pack of panels are at some distance from the fences; in this case the blade does not have to travel along an uncovered section before it reaches the pack. A cylinder (2) synchronises lowering of the guard flaps and lowering of the pressure beam; the two movements are therefore interlocked and cannot take place separately.
Always substitute damaged safety bars immediately.

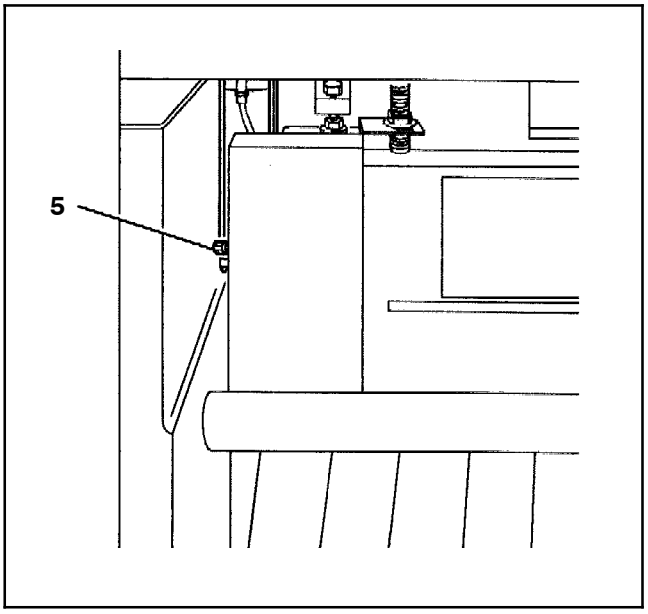


On the operator side of the crosswise panel saw, a safety bar (3) runs the entire length of the pressure beam. The bar is hinged on the pressure beam so that its movements trigger a microswitch (4).
The safety bar is an accident prevention device which stops the device should a cutting cycle be started accidentally while the operator's hands are still under the pressure beam. If a cycle is accidentally started in such a situation, the pressure beam is lowered but the safety bar (fixed to the pressure beam) encounters the operator's fingers first, moves upwards on its hinges thus triggering the microswitch (4) which in turn triggers a saw emergency condition, whereby the saw is stopped and the pressure beam is raised.

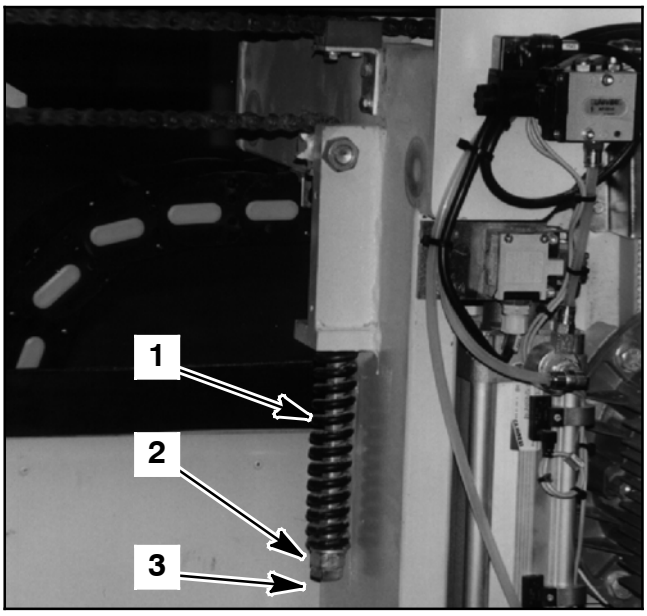


OPERATING PRESSURE

Check the pressure gauge on the panel saw head that operating pressure is below 4.5 bar. Recommended operating pressure is 4 bar.
If the pressure beam is lowered too rapidly or too slowly, adjust the discharge regulators (5) on the pistons to obtain the desired lowering speed.
If the pressure beam is lowered in a jerky fashion, check that there are no kinks or restrictions in the compressed air hoses to the pressure beam.
Check that all moving parts are clean and free from dust. To ensure trouble free running, remove the head covers once a week and clean inside with a jet of compressed air. Clean the chain with a brush soaked in naphtha.



11.2. DRIVE CHAIN AND IDLING SPROCKET



Over long operating periods the chain may stretch to such an extent that spring (1) is no longer able to keep it taut. If this happens, the chain must be shortened. Do this by removing the necessary number of links for the chain to return to the values indicated in the drawing.
Ideal chain tension is shown in the drawing below. The spring must be compressed by its nut so that there is a gap of approx. 5–6 mm between one turn of the spring and another:

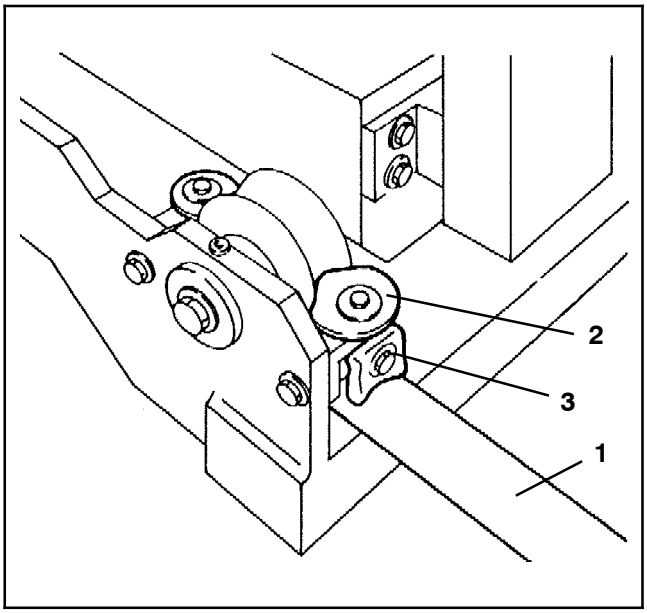
–Unscrew the lock nut (2).
–To increase spring compression, tighten the nut (3); to decrease spring compression, unscrew the nut (3).
–When you have obtained the correct spring compression, tighten the lock nut (2).

Excessive chain tension will cause undue strain and lead to abnormal wear of mechanical parts. If the chain is too slack this will cause irregular carriage trasversing and consequent imperfections in cutting.

Clean the chain once a month and apply a thin coating of naphtha with a brush.

The idling sprocket is mounted on a sealed, self–lubricating bearing and only requires cleaning. Clean once a month; remove the cover (5), clean with a jet of compressed air and lubricate with a thin film of naphtha.

11.3. SAW CARRIAGE



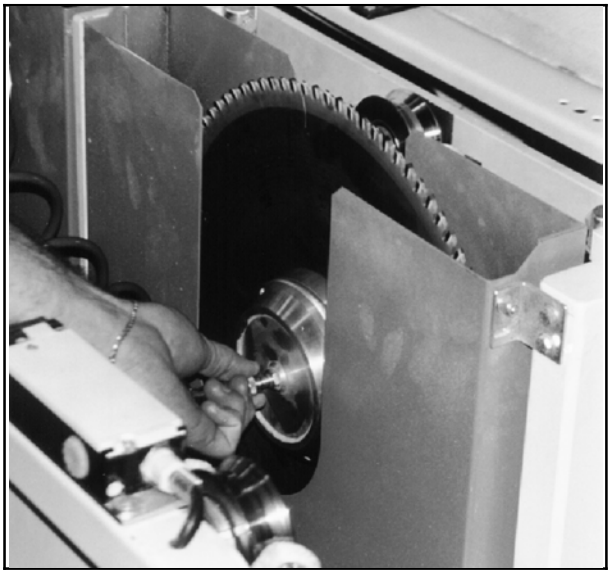
Once a week, remove the side covers and clean inside the machine with a jet of compressed air. Thoroughly clean the vertical columns of the carriage; accumulated dust will interfere with the smooth operation of the frame and can cause the blade to stop short of its normal stop position.
Once a month, clean the horizontal carriage guides (1) using a brush soaked in naphtha; dry with a clean rag. Regularly check that the felt cleaning pads (2 and 3) are working efficiently. Renew if necessary.

11.4. CHANGING THE MAIN SAW BLADE

☞ Use suitable protective gloves when changing the blade.

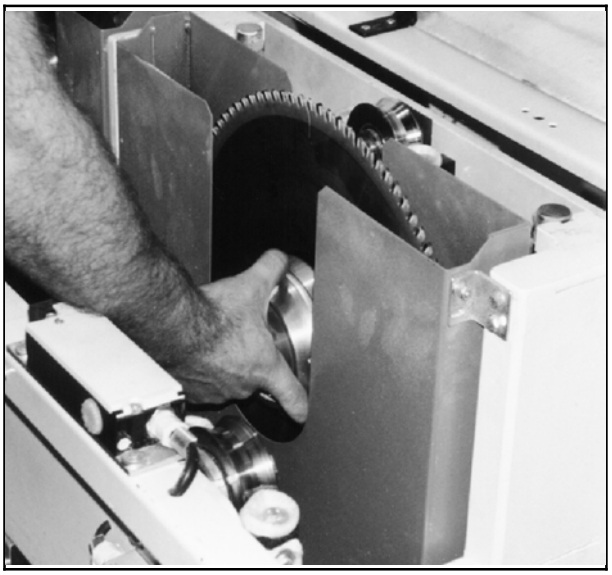
☞ Replace worn blades with a version featuring the same diameter and thickness (see table, chapter 3.5.).

To make the machine safe for maintenance work, move the saw carriage to the end of its return stroke and raise the blade compartment cover (1). The machine and the saw blade are now safe to work on.



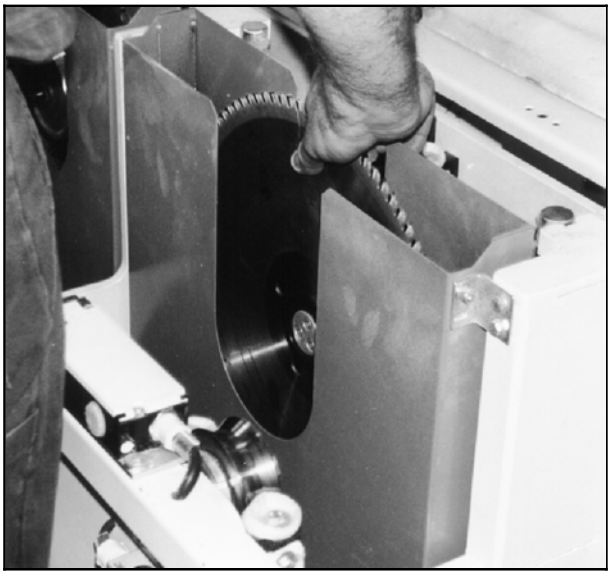
Fit the compressed air hose on the coupling of the blade locking flange. When the air is turned on, the ring nut is released, making it possible to remove the blade. When removing the blade, take care not to knock the cutting edge against the machine.

Before reassembling the blade, carefully clean the contact surfaces (blade sides, locking flange and hub flange). Now reassemble the blade following the above procedure in reverse, and making sure that the teeth are in the correct direction.



Before removing the compressed air hose from the coupling, turn the locking flange to the right, until the reference pins of the locking flange are well in contact with the slots of the hub flange.

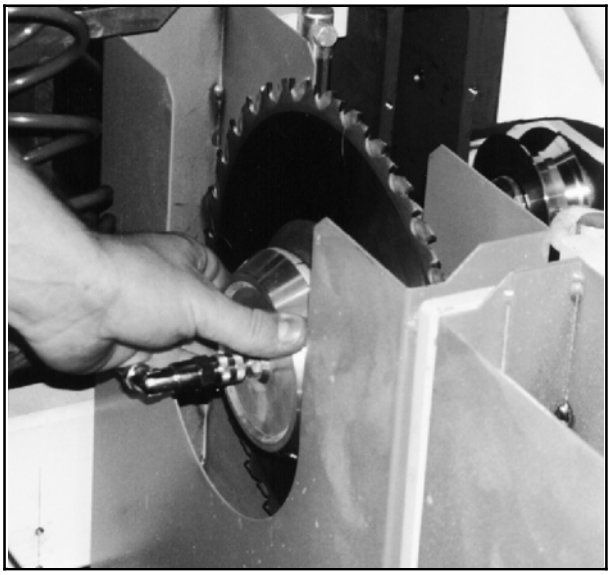
N.B. To facilitate accurate assembly, the outer diameters of the locking flange and the hub flange have been marked with reference notches. Ensure that these notches are aligned with each other when reassembling the unit.



11.5. CHANGING THE SCORING SAW BLADE

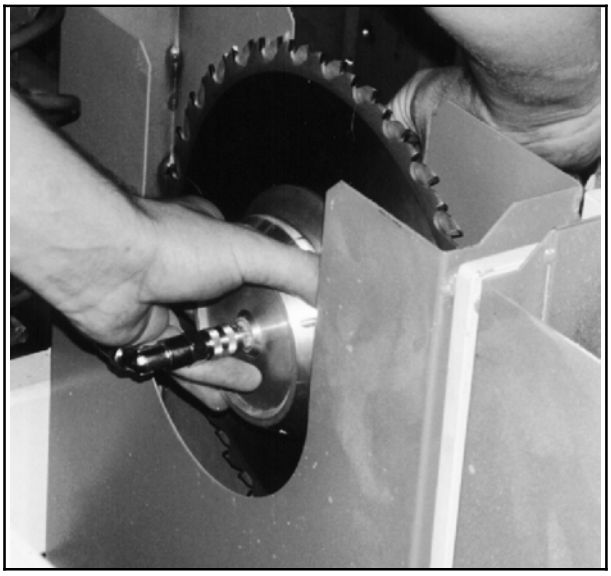
To make the machine safe for maintenance work, move the saw carriage to the end of its return stroke and raise the blade compartment cover (1). The machine and the saw blade are now safe to work on.

Fit the compressed air hose on the coupling of the blade locking flange. When the air is turned on, the ring nut is released, making it possible to remove the blade. When removing the blade, take care not to knock the cutting edge against the machine.



Before reassembling the blade, carefully clean the contact surfaces (blade sides, locking flange and hub flange). Now reassemble the blade following the above procedure in reverse, and making sure that the teeth are in the correct direction.

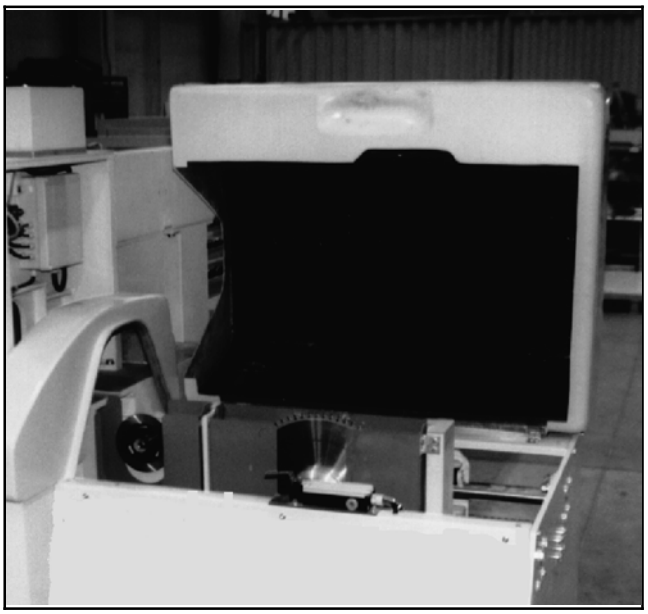
Before removing the compressed air hose from the coupling, turn the locking flange to the left, until the reference pins of the locking flange are well in contact with the slots of the hub flange.



N.B. To facilitate accurate assembly, the outer diameters of the locking flange and the hub flange have been marked with reference notches. Ensure that these notches are aligned with each other when reassembling the unit.

11.6. REPLACING BLADE HUB BEARINGS

To replace the blade hub bearings, contact a Giben Service centre or suitably qualified personnel for assistance.
In the event of replacement, the air cylinder and springs inside the hub should also be checked.



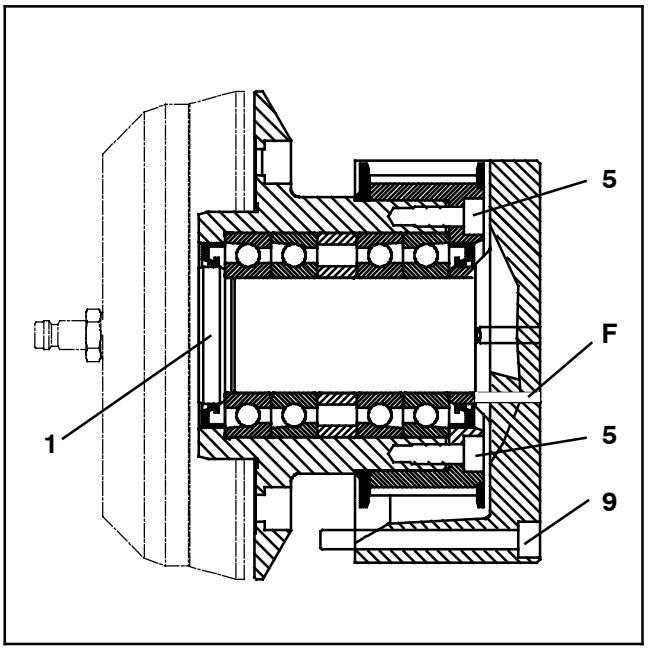
Replace the bearings as follows:

a) Position the blade carriage in the return limit position, lift the blade guard as described above.

b) Remove the blade as described in Chapter 11.4.

Remove the belt guard fence, loosen the motor retaining bolts, and turn the adjuster screw (see Chapter 11.8 – Belt renewal) to slacken off the belt; fully unscrew screws (9), withdraw the complete hub from the plate and remove the belt.

With the hub on a work bench, remove cover (1) and loosen screws (5).



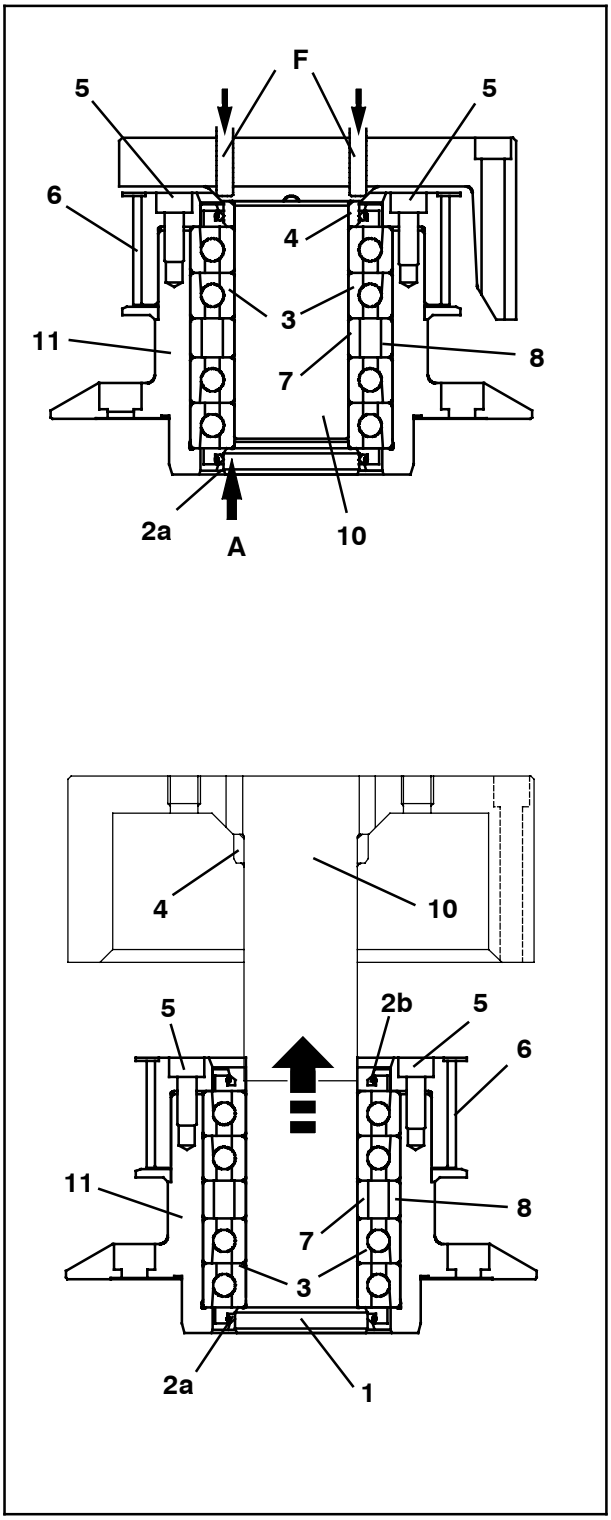
c) At this point you need to withdraw shaft (10) as follows: using holes (F) and two ø 5 dowels, press spacer (4) until the pack of bearings is withdrawn from the shaft.
Fully unscrew screws (5), remove the toothed sprocket (6) and seal (2a).
Proceed with the removal of the bearings (3) from the seat in the hub (11), pressing on inner ring (A).
Spacers (7) and (8) will also be removed along with the bearings; these spacers must be refitted.
d) Install the new oblique bearings (3) and spacers (7) e (8) in the hub, making sure that the bearings are oriented as shown in the figure.

d) Mount the new angular contact bearings (3) and spacers (7) and (8) taking care to position the bearings correctly.

N.B. Press the external ring to fit the new bearings; apply 9 cc of kluber isoflex super LDS 18 grease or similar uniformly over the bearings.

e) Refit the entire assembly as follows:
Fit seal (2b) in the seat of sprocket (6).

Fit sprocket (6) on the blade hub (11) without fully tightening screws (5) (we recommend the use of medium type thread lockers)
Fit spacer (4) on shaft (10) and then refit the complete hub assembly, taking care to press on the inner ring of bearings (3).
Fit cover (1) and fully tighten sprocket screws (5) through the service holes, which must then be closed with M10x10 grub screws.
Finally, refit seal (2a).

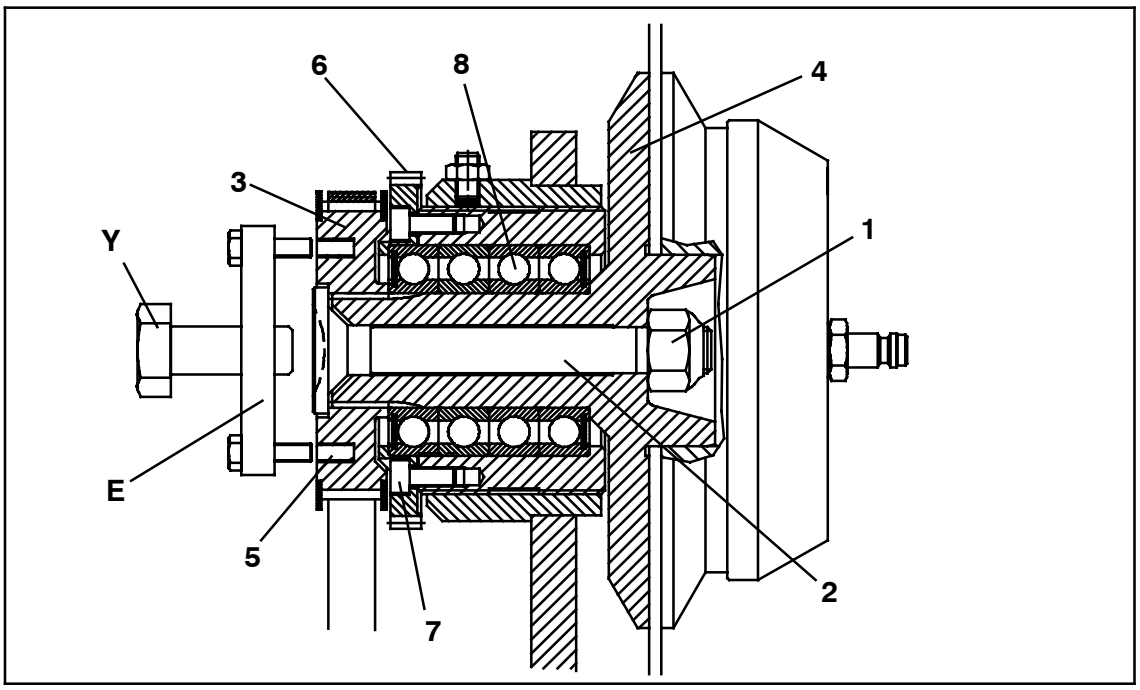


☞ Run in the hub by rotating it without load for periods of 6–8 minutes interspersed with pauses of equal length until the temperature stabilises. We recommend 4 such cycles followed by approx. 30 minutes without load before resuming production.

11.7. REPLACING SCORER HUB BEARINGS

If the bearings of the blade hub require changing, we recommend that you contact Giben Customer Service for this operation.
When these bearings are being changed it is also advisable to check the condition of the pneumatic cylinder and the springs inside the locking hub.

To change the scoring blade hub bearings, proceed as follows:
a) Move the saw carriage to the end of its return stroke and raise the blade cvompartment cover; the machine will now be safe to work on;
b) after removing the blade, extract the belt, loose the screws (8) and take out the complete hub;
c) Slacken nut (1) keeping pin (2) secured in point A by means of a screwdriver;
d) Disassemble the pulley (3). If this is not possible by hand, use puller (E). Secure the puller to the pulley by means of M5 screws; tighten the central screw (Y) on the puller to enable pulley removal.
e) Slacken screws (7), remove the gear (6). Fix puller (E) to holes (5), by means of M5 screws. Tighten central screw (Y) of the puller until hub (4) can be removed. Remove bearings (7).
f) To re–assemble the unit, carry out the above operations in reverse order. When fitting new double shielded bearings, the external seals on adjacent bearings must be removed (detail X), to avoid the risk of the unit overheating.



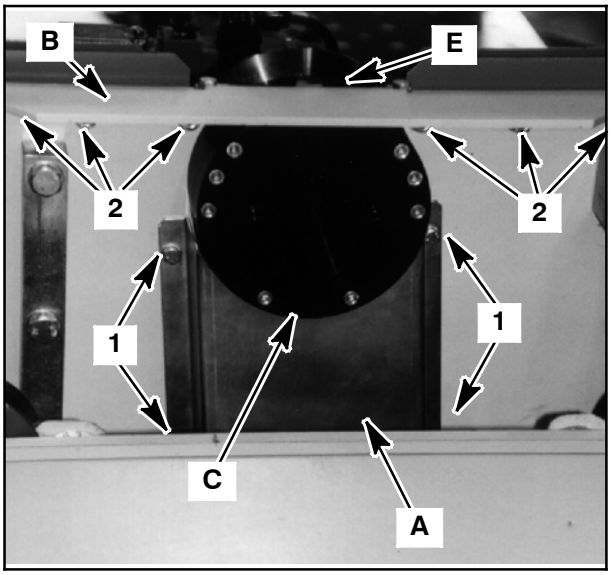
11.8. BELT REPLACEMENT

Position the blade carriage in the return limit position and lift the blade guard.

MAIN BLADE BELT REPLACEMENT

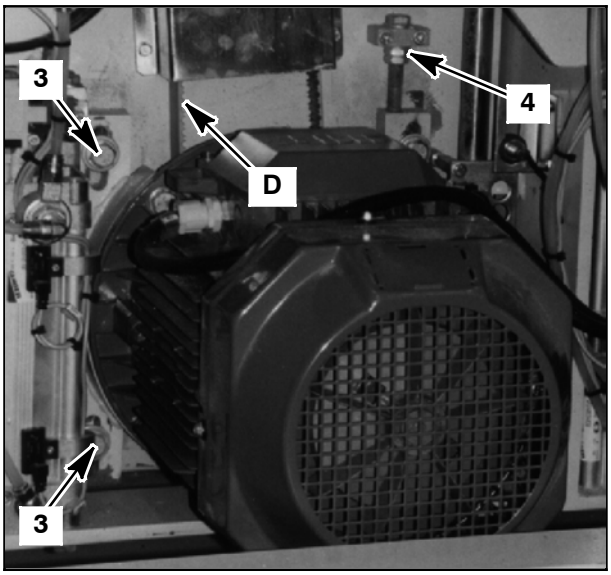
The replace the main blade belt, proceed as follows:

– Disassemble guard (A), protecting the motor belt, and remove the four screws (1);
– remove guard (E) by unscrewing the two screws which secure it to the carriage;
– disassemble fence (B) by slackening screws (2).
– Lower the extraction hood into the dust conveyor channel and extract from the side.



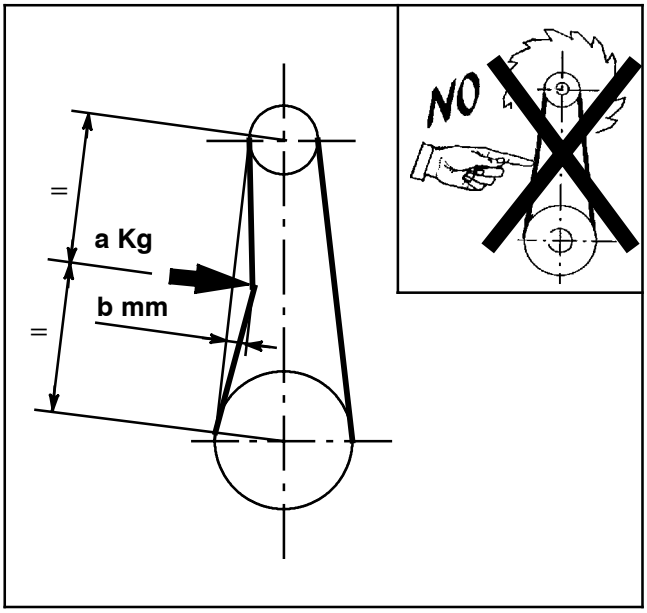
To remove belt (D) from the motor pulley, slacken the four fixing screws (3), and turn screw (4) clockwise to lift the motor and enable belt removal.
Following the above slacken the blade hub screws (C) and lift to remove; caution: the belt withdraws with the hub; detach manually to remove.
– Replace the belt with a new version and proceed with re–assembly in reverse order of the above.

N.B. Use a medium thread lock for the hub fixing screws (C).



TENSIONING

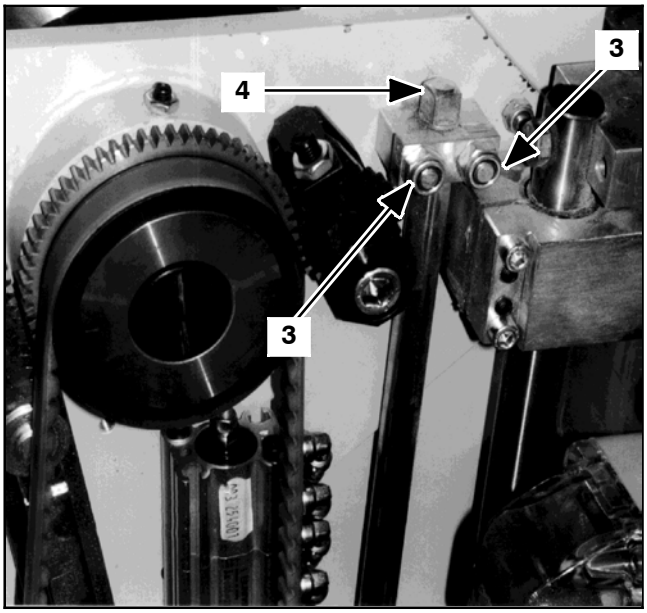
Belt tension does not stretch with time and use and therefore belt tensioning is only required during replacement.
Ideal tension is obtained when a force of (a) 6 kg applied halfway between the motor pulley shaft and the driven pulley causes the belt to give by (b) 8 mm.



☞ **With this device in place, over/under tensioning of belt is impossible.**

CHANGING THE SCORING SAW BLADE

Remove motor belt guard.
Loosen nuts (1) slightly and turn screw (2) clockwise to lift motor. This loosens belt tension.
Remove the belt and replace it with a new one. Repeat the procedure in reverse order to return to normal working conditions.



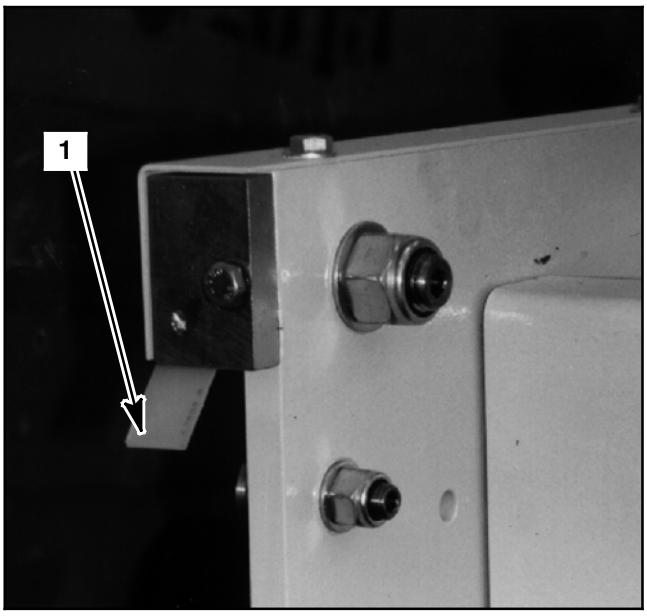
TENSIONING

Belt tension does not stretch with time and use and therefore belt tensioning is only required during replacement.
Ideal tension is obtained when a force of (a) 1,5 kg applied halfway between the motor pulley shaft and the driven pulley causes the belt to give by (b) 8 mm.

☞ **With this device in place, over/under tensioning of belt is impossible.**

11.9. PUSHER GUIDE CLEANING PADS

At regular intervals, check that the pads (1) are keeping the sliding surfaces clean. If the pads (1) are so worn that they no longer clean properly, change them immediately.

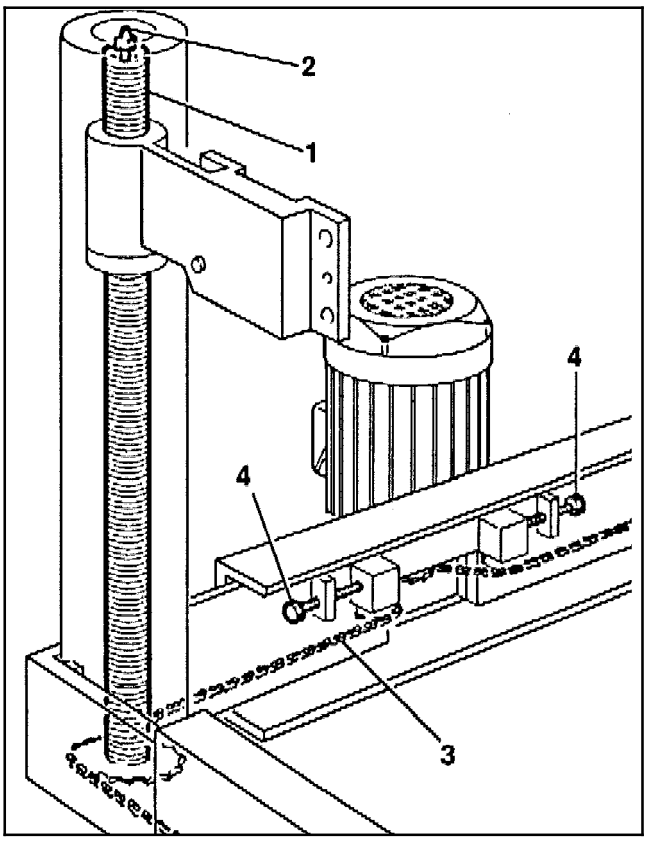


11.10. LIFTING TABLE

Lifting table maintenance is minimal.

Once a week: thoroughly clean the lifting screws; raise the table to its UP position and genereously grease the lifting screws (1) through the grease nipples (2).

Once a week: clean the chain (3) with naphta and check chain tensioe; tighten, if necessary, on the adjuster screws (4).

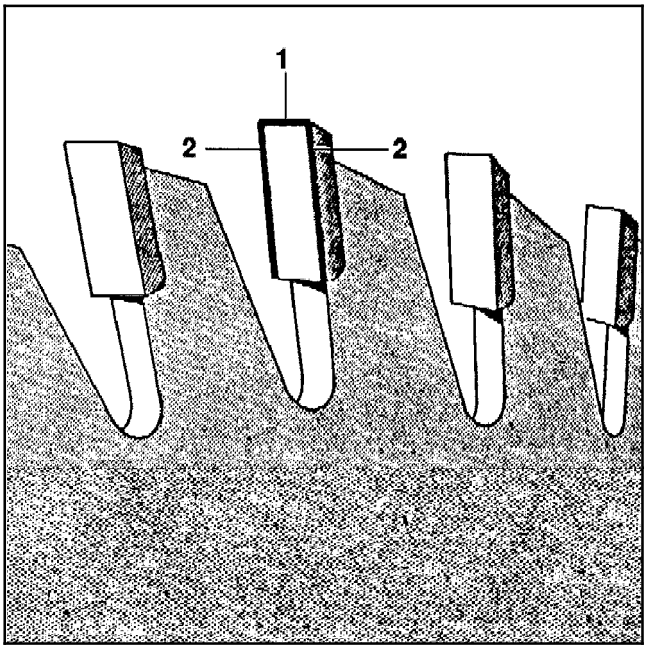


11.11. BLADES

GIBEN panel saws can be used to cut various types of material. Each type of material requires a special blade. Further information on blade types can be obtained from blade manufacturers.

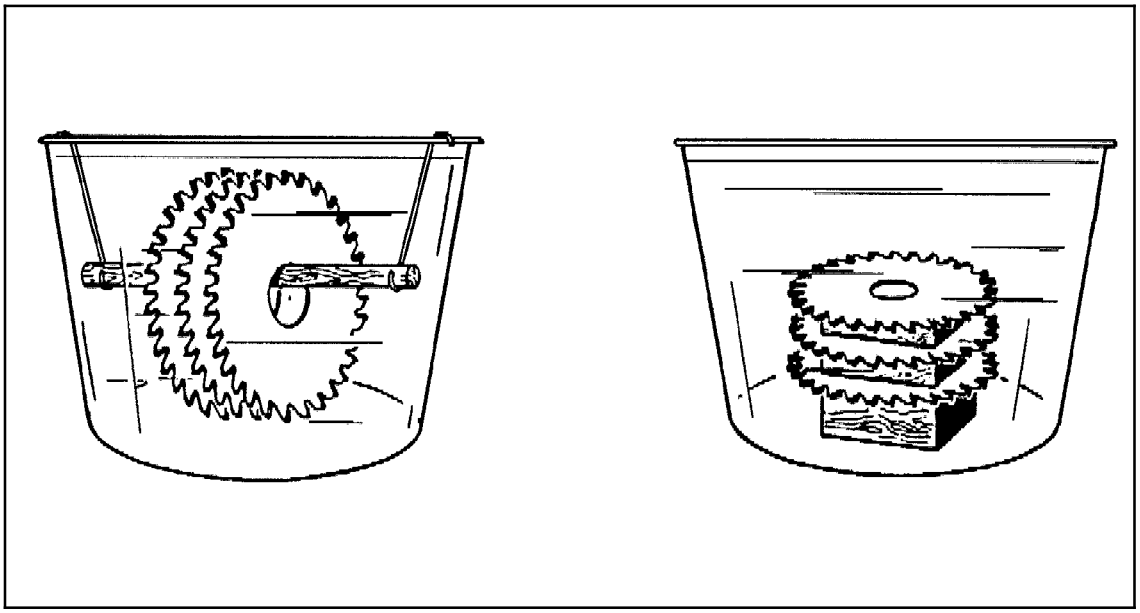
SHARPENING THE BLADES

We recommend that you sharpen the blades when the edges (1) and (2) have become rounded to a maximum of 0.2 mm, i.e. after two or three hours work on laminated panel for the main saw blade or after six to nine hours for the scoring saw.
A blade can usually be resharpened approximately 20 times before it must be changed.



Before sharpening a blade, remove any deposits left by the material cut previously otherwise this will clog the sharpening wheel. Deposits can be removed by soaking the blades in a very dilute caustic soda/water solution for several hours.

N.B. The blades must be hung or stacked in the bath so that the solution can reach all parts of the blade.



11.12. REGULAR MAINTENANCE

Maintenance periods have been estimated on the basis of a daily shift averaging 8 hours. These times are intended as a guide only. Maintenance periods vary according to the operating and working conditions (if there is dust in the atmposphere or considerable variations in temperature, etc.) of each machine and should therefore be varied accordingly. In the sections which follow we have listed all the regular maintenance operations required to ensure maximum performance from your machine.

☞ Turn the machine off before performing any adjustments or replacing parts; to ensure that the machine is not turned on during such operations, the mains switch may be locked (lock not included).

☞ The machine must be switched off before starting any maintenance or repair work.

☞ Bear in mind that the electric cabinet in not equipped with an electric door interlock. Cabinet doors may only be opened with a special key.

NOTE : . . . **Drive belts** :Adjust the belt tension after the first 50 working hours.
Adjust the tension of a new belt after the first 50 hours.

. . . . . **Reducers and reducer motors**:The reducers fitted to the machine have been lubricated with a long-life grease and should not require further lubrication.
However, if it does become necessary to change the grease for any reason, only use the grease recommended in the table of lubricants.

KEY – Personnel
★ = Operator
★★ = Maintenance worker
(See the Chapter 1.3.)

DAILY MANTENANCE

PART	OPERATION	QUALIF.	DESCRIPTION
	GENERAL		
	Clean	★	Remove sawdust and off–cuts from the machine, especially from moving parts.
	PNEUMATIC EQUIPM.		
	Check and top–up	★	Check and top–up the oil level in the lubricators.
	Drain water	★	Drain the water from the filters.

WEEKLY MAINTENANCE

PART	OPERATION	QUALIF.	DESCRIPTION
	GENERAL		
	Checking screw tightness	★	Check that all screws are tightened, particularly of moving mechanical parts.
	PANEL SAW		
Carriage guides	Clean	★	Clean with a compressed air jet.
Drive chains	Clean	★★	Clean with a compressed air jet.
Felt cleaning pads on guides	Check	★★	Check that the felt pads follow and clean the rollers and guides.
Pressure beam chains and sprockets	Clean	★	Clean with a compressed air jet.
Carriage raising guides	Clean	★	Clean with a compressed air jet.
	ALIGNER		
Guide	Clean and lubricate	★★	Clean with a brush soaked in petrol and dry with a cotton rag.
Chains and sprockets	Clean	★	Clean with a compressed air jet.
Roller guides	Clean and lubricate	★★	Clean with a brush soaked in petrol and dry with a cotton rag.

PART	OPERATION	QUALIF.	DESCRIPTION
		PUSHER	
Guide cleaning pads	Check	★★	Check that the pads follow the guides closely.
		PNEUMATIC EQUIPM.	
Pneumatic cylinders	Check	★★	Where possible, check the operating speed of the cylinders using the screws on the rapid discharge valves.
		LIFTING TABLE	
Raising screws	Grease	★★	Generously grease the grease nipples.
Chain	Clean and check	★★	Clean with petroil and check chain tension.

MONTHLY MAINTENANCE

PART	OPERATION	QUALIF.	DESCRIPTION
		PANEL SAW	
Carriage guides	Clean and lubrificate	★★	Clean with a brush soaked in petroil and dry with a cotton rag.
Drive chains	Check and clean	★★	Check chain tension and adjust if necessary. Clean with a brush soaked in petroil and dry with a cotton rag.
Felt cleaning pads on guides	Check	★★	Check felt pad efficiency. Change if worn.
Pressure beam chains and sprockets	Clean and lubrificate	★★	Clean with a jet of compressed air and lightly lubricate with petroil.
		ALIGNER	
Chains and sprockets	Lubricate	★★	Clean with a brush soaked in petroil and dry with a cotton rag.

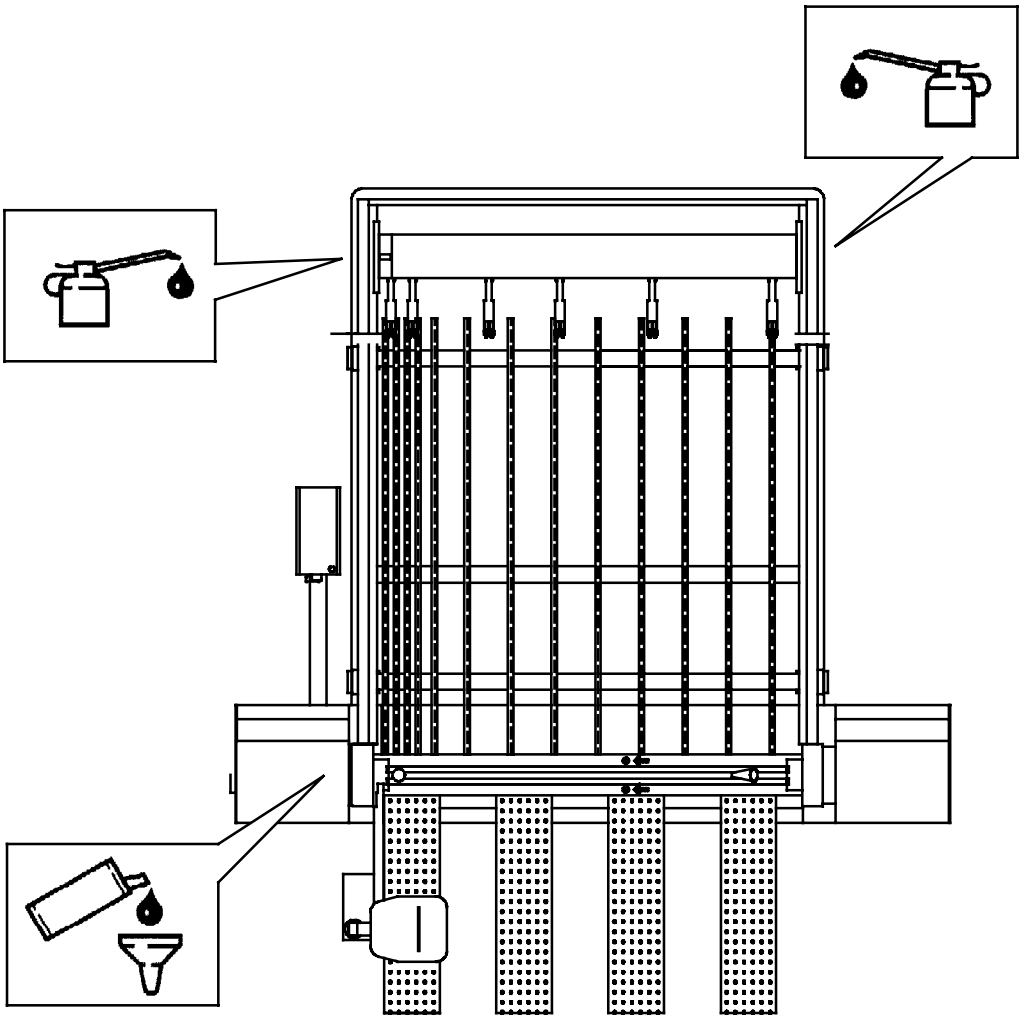
PART	OPERATION	QUALIF.	DESCRIPTION
	PUSHER		
Guide	Clean and lubricate	★★	Clean with a brush soaked in petroil and dry with a cotton rag.
Rack and pinions	Check and lubricate	★★	Check the play between rack and pinions; adjust if necessary. Clean the rack and pinions with a brush soaked in petroil and dry with a cotton rag.
Guide cleaning pads	Check	★★	Check that the cleaning pads are efficient. Change worn pads.
Self–braking motor Pneumatic clutch (Ac motor only)	Check	★★	Check that the air gap is 3–4 tenths of a millimetre.
Belts (AC motor only)	Check	★★	Check belt tension and tighten as necessary.
	PNEUMATIC. EQUIPM.		
Hoses	Check	★★	Check the compressed air supply hoses and ensure that there are no leaks at the connectors.
	ELECTRICAL EQUIPM.		
Microswitches	Check	★★	Check that all retaining screws/bolts are tight especially those on the heads and actuating levers.
Power supply cables and cableways	Check	★★	Check that all wires and cables are properly insulated and fixed to cableways with clips. Check that cable ways are tight.
Emergency pushbuttons. Safety devices	Check	★★	Check that these devices are operating correctly.

ANNUAL MAINTENANCE

PART	OPERATION	QUALIF.	DESCRIPTION
ALIGNER			
Rollers	Check	★★	Check roller wear and change if necessary
PUSHER			
Self–braking motor Pneumatic clutch	Check	★★	Check the wear of the Ferodo lining and change if necessary.

11.13. LUBRICATION

This panel saw is fitted with self–lubricating bushes and bearings, oil seals and other devices which mean that regular lubrication has been reduced to the absolute minimum.
The points which require regular lubrication are indicated on the drawing. Check all lubricant at regular intervals and top–up if necessary. Only use the lubricants specified in the lubricant table below.



LUBRICANT TABLE	
LUBRICANT	
REDUCERS	
MAKE	**TYPE**
IP	TELESIA COMPOUNT A
TOTAL	TOTAL GREASE
AIR LUBRICATOR	
MAKE	**TYPE**
ROL	LR 15
AGIP	OSO 15
ESSO	SPINESS 34
BP	HP 3
SHELL	VITREA
RACK AND PINIONS	
PETROL	

12. FAULT FINDING

12.1. INTRODUCTION

Prismatic2 SP/SPT model panel saws are controlled by the following devices:

A – An electronic programmer
B – Programmable Logic Control
C – Input transducers
D – Output transducers

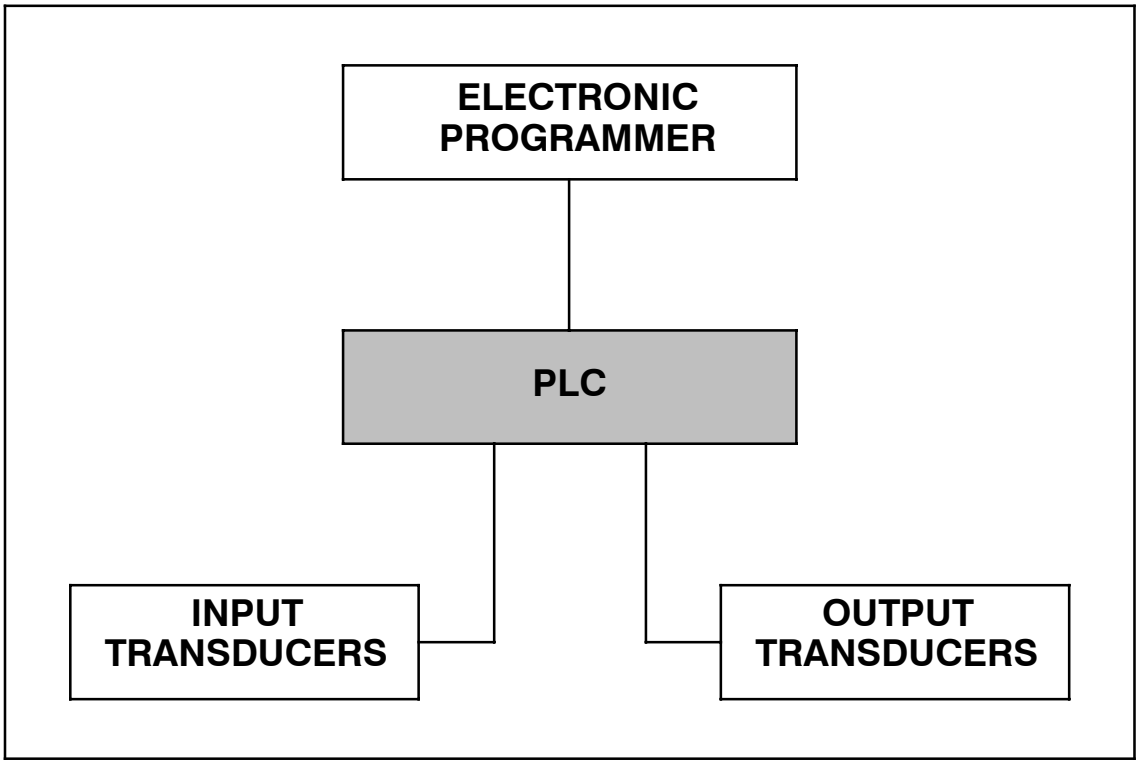
A – The electronic programmer controls panel cutting only and is used to set cutting patterns and quantities. The electronic programmer communicates exclusively with the PLC through its inputs and outputs.In the case of panel saws with pushers powered by D.C. motors, the electronic programmer also supplies the reference voltage for motor actuation.This reference voltage determines the acceleration slope, maximum speed and deceleration slope of the motor.

B – The Programmable Logic Control (PLC) controls the movements of the machine. The PLC handles all the information coming from the machine (from the input transducers and the electronic programmer) and processes it using its own internal program; it then supplies the output transducers with the signals necessary for machine operation.
It is clear therefore that a particular output (i.e. a particular machine movement) requires all the necessary inputs requested by the program in order to function properly.
The electrical circuit diagrams of our machines show all PLC inputs and outputs. Inputs are identified with the symbol I (Klöckner Möller PLC) and outputs with the symbol Q (Klöckner Möller PLC). All inputs and outputs have LED located on their related input and output con nectors to indicate that they are ON (LED on) or OFF (LED off).
In order to check, for example, that a transducer connected to an input is working correctly, the operator must check the LED for that input and also know whether this LED is normally on or off to indicate normal operation of the input.For example: the pusher forward stroke limit switch is a microswitch with a contact which is always ON (i.e. with the contact closed) except when the pusher has not reached the limit switch.

C – The input transducers are devices located at specific positions around the panel saw and indicate the current positions of the moving parts of the machine (e.g. pressure beam, saw carriage, aligner, pusher etc.).
This panel saw uses microswitches and limit switches as input transducers.
The machine also has photocells and other microswitches as transducers to indicate the presence or absence of material.Finally, on the control panel console there are selector switches used to select and actuate the various panel saw functions.

D – The output transducers, on the other hand, have the task of moving the various moving parts of the machine in accordance with the instructions of the machine program selected. In this case the transducers consist of the coils of solenoid valves and interface relays which in turn actuate switches, lights and other devices.

It is clear therefore that the machine is completely controlled by the PLC and thus the program installed on the EPROM of the CPU card. A fault can therefore only be traced by analysing the status of the input and output LEDS.



12.2. FAULT FINDING PRISMATIC2 SP / SPT MODEL

SAW BLADES WILL NOT START

Check the following:
Ensure that the main switch is on and that no fuses are broken.
Ensure that there is auxiliary voltage on the electrical panel and at the PLC input. Ensure that safety devices (emergency bar and blade cover) have not been tripped.
Ensure that magnetothermal switches and their related auxiliary contacts are on.
Carefully check the auxiliary contacts. These enable machine movements and if broken will stop the machine even though the magnetothermal switches are not broken.

SAW BLADE WILL NOT RISE

The blades can only be raised when the presser beam has been lowered.
If the pressure beam has not been lowered, trace the cause.
(See the section "PRESSER BEAM WILL NOT RISE" below.)
If the pressure beam has in fact been lowered carry out the checks listed here.

Electrical checks.
If the output of the blade raising solenoid valve is OFF, check the input for the saw carriage lower position.
If the output is ON, check that voltage is reaching the coil of the blade raising solenoid valve.
If voltage is reaching the coil then there is a fault with the solenoid valve or the pneumatic system.

Pneumatic checks
Check that mains air is reaching the blade raising solenoid valve; if this is the case try moving the valve manually (with a small screwdriver) to check that it is operating efficiently.
Check the entire length of the hose to ensure there are no leaks or kinks in the hose.
Check that the washers on the rapid discharge valves (mounted on the blade raising cylinders) are not broken or worn, check that the adjusters on these valves have not been screwed down completely.Check that the seals on the blade raising cylinders are not leaking.

Mechanical checks
Ensure that no offcuts or shavings are obstructing free upward movement.Check that the bearings on the vertical blade guides are not seized.

SAW BLADES WILL NOT LOWER

Check that the blade raising output is OFF (in this situation voltage must not be reaching the solenoid valve coil). If this is not the case, check the input of the cutting limit switch; this must be pressed when the carriage comes to the end of its travel.

Pneumatic checks
Check the solenoid valve and the rapid discharge valve as described in the section "SAW BLADES WILL NOT RISE" above.
IMPORTANT : When the air is switched off, the blades descend under their own weight; if there are no mechanical obstructions the blades should be lowered.

Mechanical checks
Ensure that no offcuts or shavings are obstructing free downward movement.Check that the bearings on the vertical blade guides are not seized.

BLADE CARRIAGE WILL NOT MOVE FORWARDS

Electrical checks

The blade carriage will only move forward when it is in the raised position and the pressure beam is lowered. Check therefore that these signals are reaching the PLC correctly.
Since there is no check for the "presser beam down" condition, it is therefore necessary to check the inverse condition, i.e. that the pressure beam is not up.
Also, check the signal for the maximum cut limit switch.If the input information is correct then the output for the blade carriage forward movement will be ON.
At this point check the interface relay for the carriage blade forward output.
Next, check the interface relay for this output.
This interface relay enables the inverter which controls the traversing motor.Check the power supply to the inverter.
Switch on the power supply to the traversing motor.

Pneumatic checks

Ensure that air is reaching the solenoid valve. Check that the solenoid valve is working correctly (see the test instructions in "SAW BLADE WILL NOT RISE" above) and that the adjuster screws on the rapid discharge valves have been opened sufficiently.
Also check that the air supply valve is opened sufficiently.

Mechanical checks

Check that there is oil in the hydraulic variator and that it is the correct grade. Check that the oil is the correct grade also for the ambient temperature.

BLADE CARRIAGE WILL NOT MOVE BACKWARDS

Electrical checks

The blade carriage is only enabled for the return stroke when it is in the lowered position.
The only input to be checked therefore is the "blade carriage lower position" input.
At this point the blade carriage return stroke must be ON.
If the carriage (even with the input at ON) will not move backwards, carry out all the electrical, pneumatic, and mechanical checks explained in "SAW BLADES WILL NOT LOWER" above.

PRESSURE BEAM WILL NOT RISE

Electrical checks

Pressure beam raising is only enabled when the blade carriage is in its lower position.
In the majority of cases this fault is due to a failure of the blade carriage to return; this is because both the pressure beam and the blade carriage depend on the "blade carriage lower position" proximity switch.
If this proximity switch is broken or if its reference bar is too far away, then the machine will be stopped with the pressure beam in the lower position and the blade carriage at the forward stroke limit switch.Check that the pressure beam output is OFF.
If the output is OFF, check that the coil of the pressure beam descent solenoid valve is not receiving voltage.
If, on the other hand, the output is ON check the output for the blade carriage input as described above.

Pneumatic checks

Ensure that air is reaching the solenoid valve. Check that the solenoid valve is efficient by operating it manually using a screwdriver.
Check that the piston seals are efficient.
Check that the seal on the rapid discharge valve is not broken and that the adjuster on this valve has not been screwed down completely.

Mechanical checks

Check that the presser beam is not clogged with dust.
Ensure that the chains are correctly engaging with the pulleys.

PRESSURE BEAM WILL NOT LOWER

Electrical checks

Check that the presser beam descent output is ON and that voltage is reaching the solenoid valve coil.If this is the case, check the operation of the solenoid valve manually using a screwdriver.

Pneumatic and mechanical checks

Follow the instructions in "PRESSER BEAM WILL NOT RISE".
If the pressure beam descent output is not ON this will only be because the panel saw main switch is off and the related PLC input is also off.

PUSHER WILL NOT MOVE FORWARDS

Electrical checks

Pusher forward movement is enabled when:
– the blade carriage is in the lower position
– the pressure beam is raised
– the pusher forward stroke limit switch is not pressed
If the pusher will not move forward it will therefore be necessary to check the PLC inputs for these items.
Forward movement is also prevented when the pusher is 500 mm from the cutting line and there is no signal from the side aligner in the upper position on the pusher side.
If these inputs are operating correctly (which means that the "pusher forward" outputs must be on), then check the interface relay and the switches controlling the self–braking feed motor.
At the same time also check that voltage (as shown on the electrical diagram) reaches the motor coil and that the motor brake is released.

Mechanical checks

Check belt tension. Check the operation of the pneumatic brake as specified in the GIBEN instructions.

PUSHER WILL NOT MOVE BACKWARDS

Electrical checks

The only condition which will prevent pusher return is a malfunction of the pusher backwards limit microswitch.
This microswitch must always be ON (i.e. with contacts closed) and will only be OFF when the pusher actually is at the backwards limit switch (OFF signal).
If the PLC output for pusher backwards is ON but the pusher will not return then check the interface relay and the control switches for the motor and the brake as explained in "PUSHER WILL NOT MOVE FORWARDS" above.

Mechanical checks

As explained in "PUSHER WILL NOT MOVE FORWARDS" above.

SIDE ALIGNER WILL NOT LOWER

Electrical checks

The side aligner will only descend if there is material present and if its input is ON.
If the side aligner descent outputs (operator and pusher sides) are both ON then check that voltage is reaching the related coils.
If voltage is arriving but the side aligner still will not lower, check the operation of the solenoid valve (using a screwdriver) and the pneumatic circuit.

SIDE ALIGNER WILL NOT MOVE FORWARDS

Electrical checks

The side aligner moves forward after it reaches its lower position; check the input for this position.

If the input is ON and the side aligner forward output is also ON then check that voltage is reaching the solenoid valve.

If voltage is arriving but the side aligner still will not lower check the operation of the solenoid valve manually (using a screwdriver) and the pneumatic circuit.

SIDE ALIGNER WILL NOT MOVE BACKWARDS

Electrical checks

The side aligner rises, reaches its upper position and then commences its return stroke. If the microswitch for the upper position of the side aligner (on both the operator side and the pusher side) is not pressed then the side aligner will not move backwards.Check the relevant inputs.

If these inputs are ON then check that voltage is reaching the coil of the solenoid valve for the aligner return stroke.If the fault persists then check the operation of the solenoid valve manually (using a screwdriver) and the pneumatic circuit.

12.3. VARIANTS FOR PRISMATIC SPT MODELS

THE PANEL COUNTER UNIT WILL LOWER

Electrical Checks
The panel counter unit will only be lowered: if there is material on the lifting table; if the pusher is at its return stroke limit switch; and if, with the machine switched to AUTOMATIC, a 'raise table' impulse is given on the selector switch.
If the counter unit will not lower then check these signals on the PLC input card.
Next check that the lower proximity switch for the detector is operating correctly; with the detector in the upper position, check that the corresponding input is OFF.

Mechanical Checks
If the PLC output for detector lowering is ON then check that voltage is reaching the coil of the solenoid valve.
If voltage is reaching the coil, check the coil and operate the solenoid valve manually (using a screwdriver) and check the pneumatic circuit.

THE PANEL COUNTER UNIT WILL NOT RISE

Electrical checks
The panel counter can only rise if it has transmitted the panel stack size to the electronic programmer and if the programmer has transmitted the STOP TABLE signal to the PLC.
If the table is stopped and the panel counter continues not to rise, check the related outputs on the PLC and check also that voltage is reaching the coil of the solenoid valve.

Pneumatic checks
If voltage is reaching the solenoid valve coil, check the operation of the solenoid valve manually, check the pneumatic cylinder and the rapid discharge valves.

THE LIFTING TABLE WILL NOT RISE

Electrical Checks
The lifting table will only rise: if there is material on the lifting table; if the pusher is at its return stroke limit switch; and if, with the machine switched to AUTOMATIC, a 'raise table' impulse is given on the selector switch.
Check the PLC input card for these inputs.
Next, check that the PLC output 'raise the lifting table' is ON. Check that voltage is reaching the contactor controlling the lifting motor.If the problem persists after these checks, check that voltage is reaching the lifting motor.

Mechanical Checks
Check that the screw drives are correctly located.

THE LIFTING TABLE WILL NOT LOWER

Electrical Checks
That the lower limit switch of the lifting table is operating correctly and that the related input on the PLC is ON.
Check the operation of the 'lower table' selector and the related input on the PLC.
Check that the 'lower lifting table' output is ON and that voltage is reaching the coil of the raising contactor.
Check that power is reaching the motor and that the motor is functioning correctly.

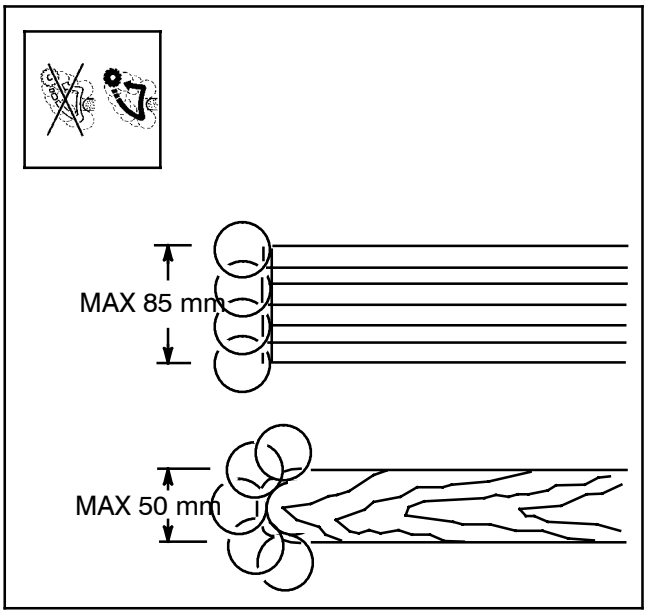
Mechanical Checks
Ensure that there is nothing under the table; offcuts could be preventing the table from being lowered.

13. OPTIONALS

13.1. POST-FORMING UNIT

GENERAL

This unit is used to cut post–formed panels and is an optional which can also be fitted to machines which are already installed at clients' premises.
The post–forming unit can be used to cut stacked rectangular panels (max. stack height 85 mm) or single panels (max. thickness 50mm) with rounded ends.
There is a selector switch for this unit on the mobile control panel; the unit operates automatically once the cutting cycle has been started.

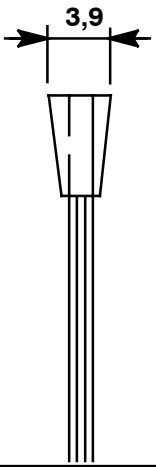


The scoring saw blade consists of two coupled blades with the following characteristics:

– external diameter	115 mm
– hole diameter	45 mm
– thickness	1,7 mm
– thickness of teeth	2,2 mm
– number of teeth	18

The combined thickness of the two blades must be 3,9 mm. When the two blades are sharpened (they must be sharpened at the same time) their thickness is reduced.
It will therefore be necessary to compensate for this by adding shims S between the blades.

AC045104000

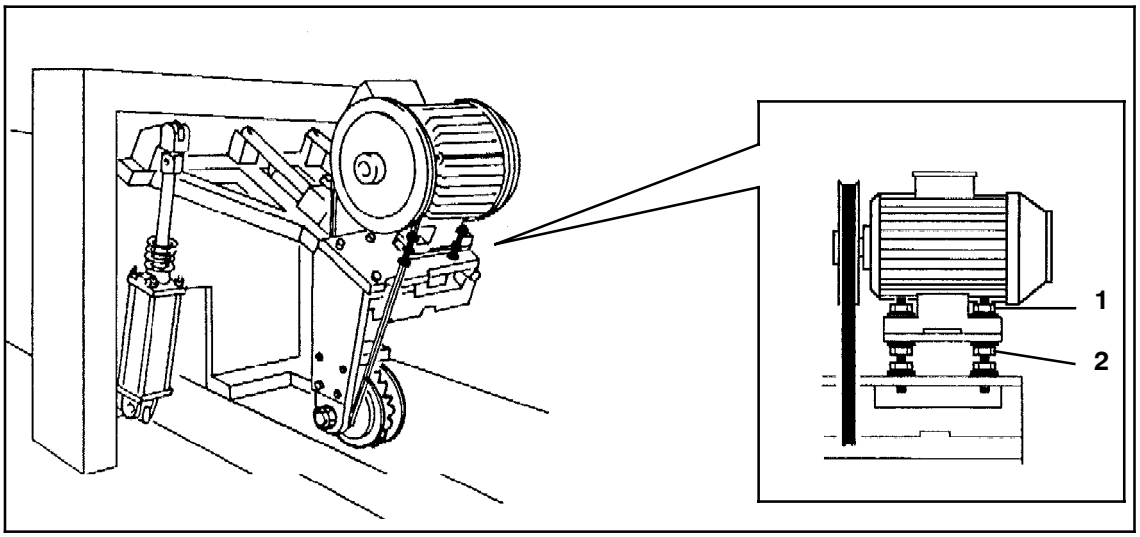


To order spare blades, please quote code number AC045104000. Spare blades supplied complete with a kit comprising :
– Nº 3, 0,1 mm shims
– Nº 3, 0,2 mm shims.

TENSIONING THE DRIVE BELTS

Check belt tension at regular intervals. The belt should "gige" by 10 ÷ 15 mm when pressed halfway between the two pulleys. To adjust belt tension:

– loosen the four nut (1)
– turn the nuts (2) by equal amounts
– once the desired tension has been obtained, tighten the nuts (1).



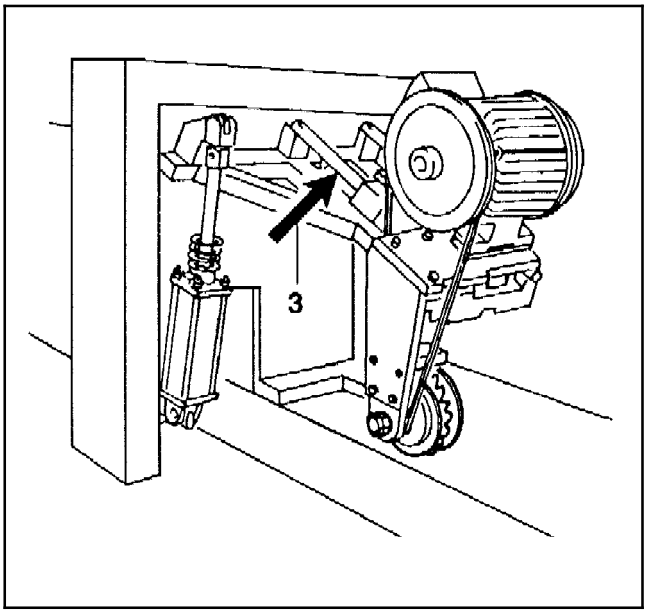
CHANGING THE BELT

Unscrew the nuts (2) by equal amounts so that the motor moves downwards slackening the belt which can then be removed. Fit a new belt and tension.

☞ The tension of a new belt must checked and adjusted after the first 50 working hours and then once a month or every 200 hours thereafter.

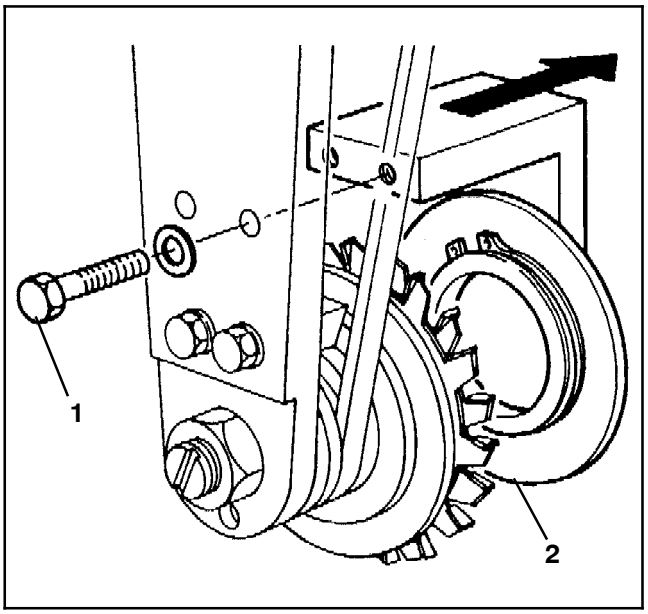
CLEANING

Once a week, clean the areas indicated by the arrows (3) using a jet of compressed air.
Accumulations of dust can interfere with the travel of the frame on the guides.

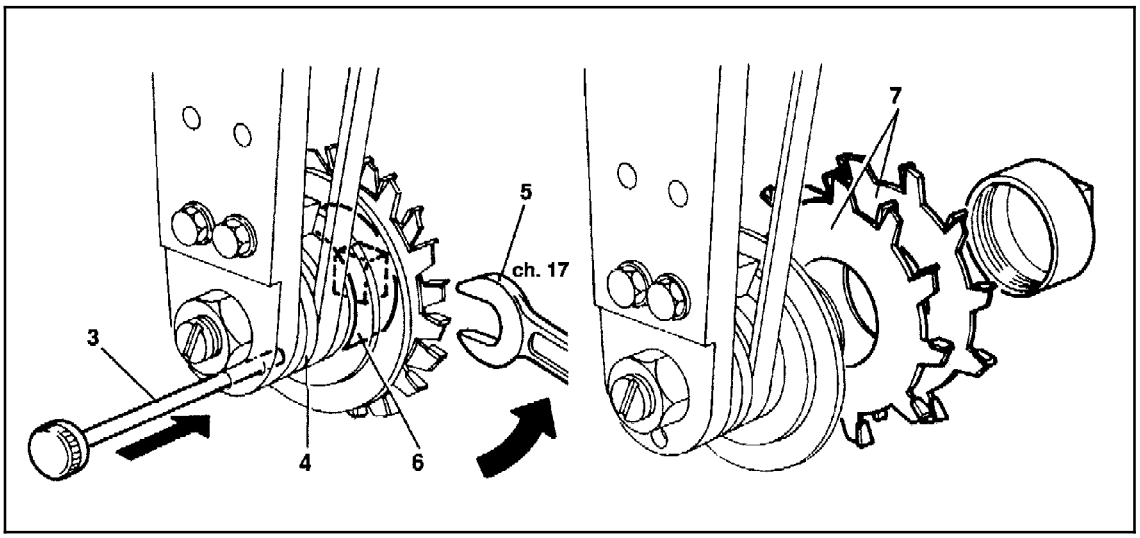


CHANGING THE POST–FORMING BLADES

Open the inspection cover.
The post–forming unit is already in position ready for removal of the blades.
Unscrew the bolts (1) and remove the support (2).

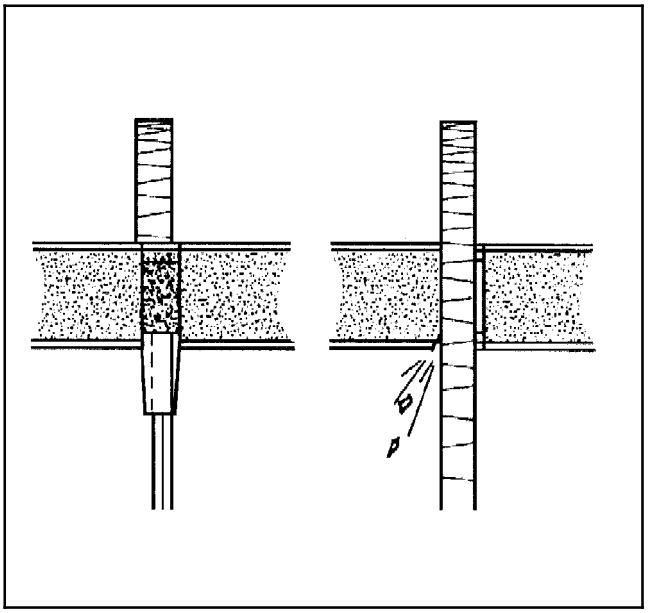


Insert the pin (3) in the hole in the side of the hub (4) stop it turning. Use the spanner (5) to release the ring nut (6). Remove the ring nut (6) and the blades (7) taking care not to damage the cutting edges.
To fit new blades, reverse the procedure just described.
Ensure that all contact surfaces are clean (blade sides,ring nut (6), hub flange) and that the cutting direction of the teeth is correct.



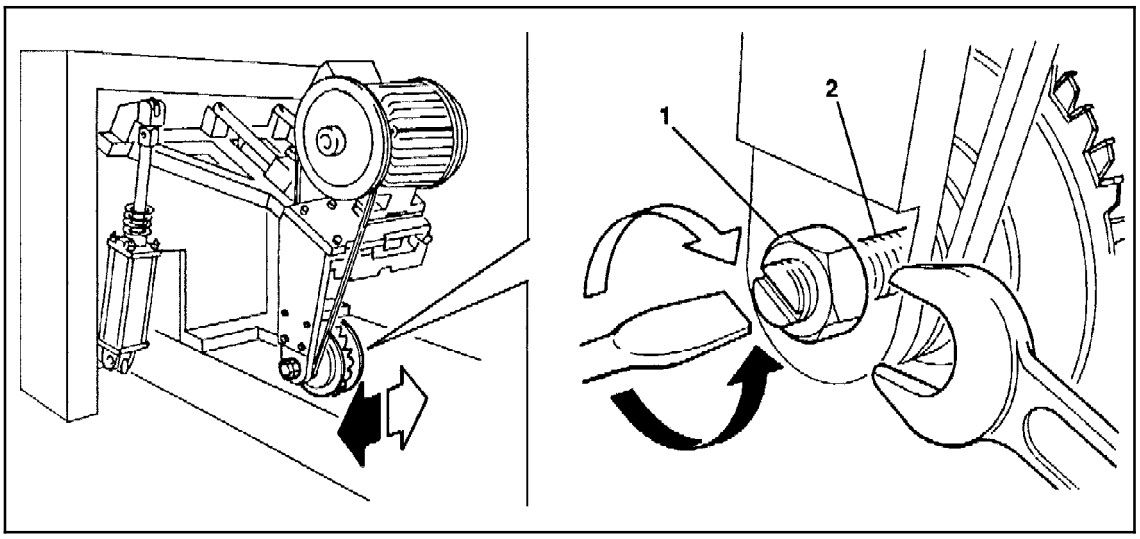
ALIGNING THE POST–FORMING SCORING SAW

The scoring saw of the POST–FORMING unit must be aligned with the main saw blade to ensure a perfect post–forming panel cut. If the scoring saw is off–centre, the board will be chipped on the side opposite to the misalignment.



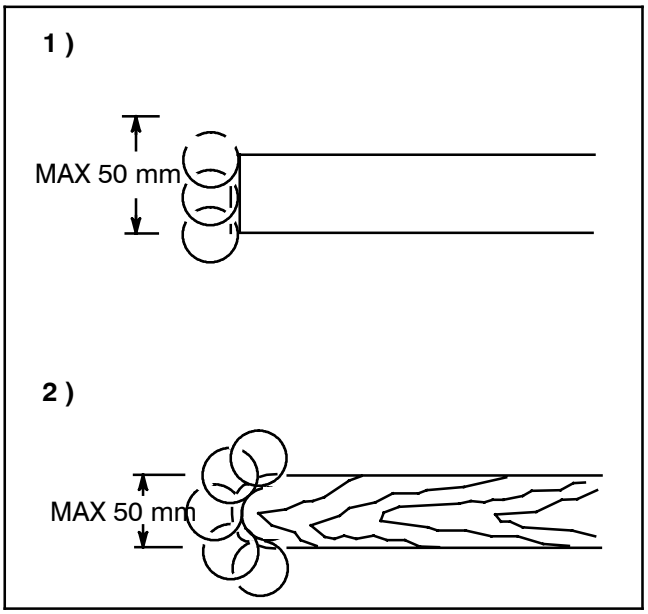
To centre the post–forming scoring saw on the main blade, proceed as follows :

– Loosen the lock nut (1). Use a screwdriver to turn the threaded pin (2) clockwise to move the scoring saw to the right and anti–clockwise to move the scoring saw to the left. When the adjustment has been completed tighten the lock nut (1).



13.2. POST-FORMING SCORER ON SAW CARRIAGE

Jump scorer for the execution of chip free cuts of edge banded with square (1) or rounded (2) profiles (post and soft formed). A pre cut of the profile is carried out during the cutting phase, significantly speeding up the cycle.
This unit is used to cut post–formed panels and is an optional which can also be fitted to machines which are already installed at clients' premises.
The post–forming unit can be used to cut stacked rectangular panels (max. stack height 50 mm) or single panels (max. thickness 50mm) with rounded ends.
There is a selector switch for this unit on the mobile control panel; the unit operates automatically once the cutting cycle has been started.



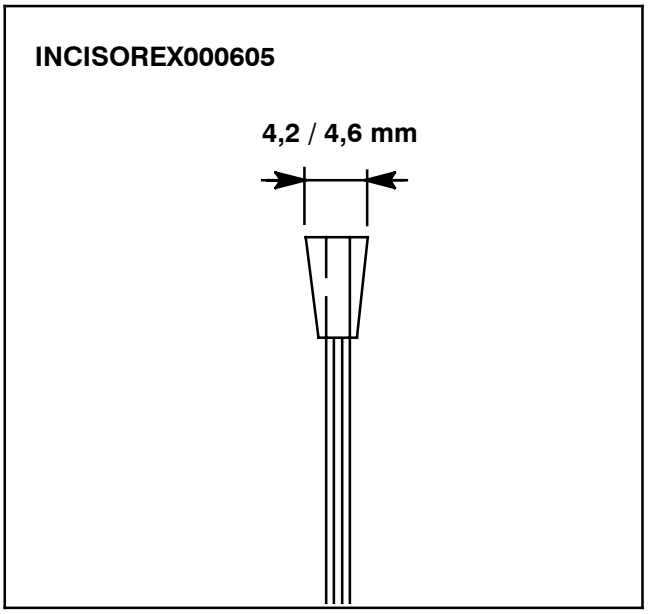
The scoring saw blade consists of two coupled blades with the following characteristics:

– external diameter	300 mm
– hole diameter	50 mm
– number of teeth	2x32

The combined thickness of the two blades must be 4,2 / 4,6 mm. When the two blades are sharpened (they must be sharpened at the same time) their thickness is reduced.
It will therefore be necessary to compensate for this by adding shims S between the blades.

To order spare blades, please quote code number INCISOREX000605. Spare blades supplied complete with a kit comprising :

– Nº 4, 0,1 mm shims



13.3. CLAMP LOCKING DEVICE

The clamp locking device used on panel saws in the event of hazardous cutting operations.

This unit enables processing of specially sized panels (less than 25 mm) and prevents the cut panel from bloking the blade during cutting.

Activation and deactivation of this unit is by means of the pushbutton located on the control console.
If an MCL programmer is fitted on the machine, the clamp locking device must be activated manually as required; on machines fitted with GDrive programmers, this devices is operated automatically.